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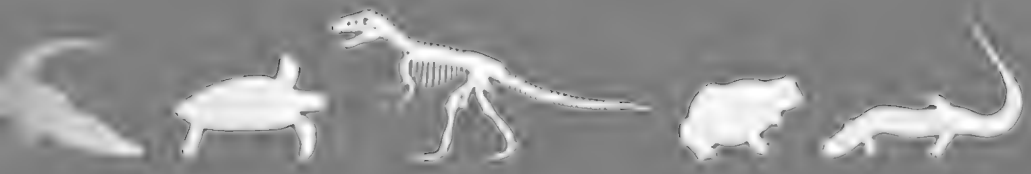

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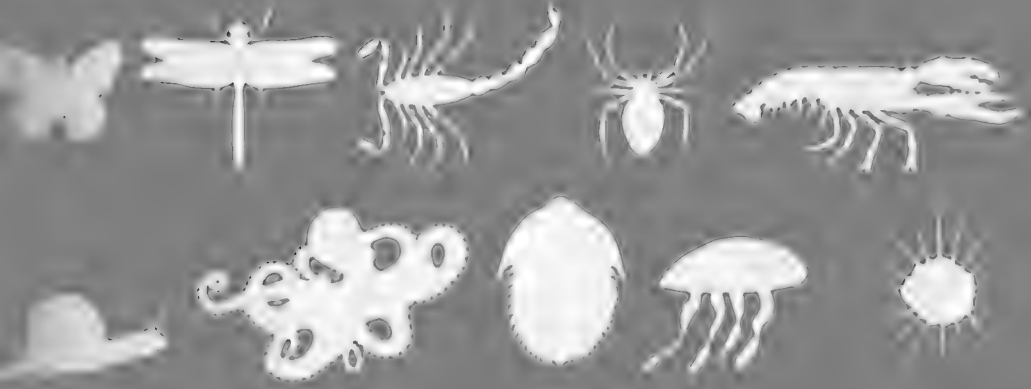

THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The *Bulletin* is published four times a year for the International Commission on Zoological Nomenclature by the International Trust for Zoological Nomenclature, a charity (no. 211944) registered in England. The annual subscription for 2000 is £110 or $200, postage included. All manuscripts, letters and orders should be sent to:

The Executive Secretary,
International Commission on Zoological Nomenclature,
c/o The Natural History Museum,
Cromwell Road,
London, SW7 5BD, U.K. (Tel. 020 7942 5653)
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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 57, part 1 (pp. 1–68) 31 March 2000

Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 56, part 4 (published on 17 December 1999). Under Article 82 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Dactyloa biporcata* Wiegmann, 1834 (currently *Anolis biporcatus*; Reptilia, Sauria) and *A. petersii* Bocourt, 1873: proposed conservation of usage by the designation of a neotype for *D. biporcata.* (Case 3145). G. Köhler & A.M. Bauer.

(2) *Valvata minuta* Draparnaud, 1805 (currently *Hauffenia*, *Neohoratia* or *Islamia minuta*; Mollusca, Gastropoda): proposed replacement of the lectotype by a neotype. (Case 3146). M. Bodon, G. Manganelli & F. Giusti.

(3) *Hydroporus discretus* Fairmaire & Brisout, 1859 (Insecta, Coleoptera): proposed precedence over *H. neuter* Fairmaire & Laboulbène, 1854. (Case 3147). H. Fery.

(4) CLARIIDAE Kutikova, Markevich & Spiridonov, 1990 (Rotifera): proposed emendment of spelling to CLARIAIDAE to remove homonymy with CLARIIDAE Bonaparte, 1846 (Osteichthyes, Siluriformes). (Case 3148). L.A. Kutikova.

(5) Conservation of some species-group names originally published as primary homonyms in *Buprestis* Linnaeus, 1758 (Insecta, Coleoptera). (Case 3149). C.L.Bellamy.

(6) *Coluber crucifer* Daudin, 1803 (currently *Psammophis crucifer*; Reptilia, Serpentes): proposed conservation of the specific name. (Case 3150). H.M. Smith et al.

(7) RHOPALURUSINAE Bücherl, 1971 (Arachnida, Scorpiones): proposed conservation as the correct spelling to remove homonymy with RHOPALURIDAE Stunkard, 1937 (Orthonectida). (Case 3151). V. Fet, M.E. Petersen & G.S. Slyusarev.

(8) *Eumeces* Wiegmann, 1834 (Reptilia, Sauria): proposed designation of *Lacerta fasciata* Linnaeus, 1758 as the type species. (Case 3152). R.W. Murphy et al.

(d) *Rulings of the Commission.* Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin*.

The International Commission on Zoological Nomenclature and its publications

The International Commission on Zoological Nomenclature was established in 1895 by the third International Congress of Zoology, and at present consists of 24 zoologists from 19 countries whose interests cover most of the principal divisions (including palaeontology) of the animal kingdom. The Commission is under the auspices of the International Union of Biological Sciences (IUBS), and members are elected by secret ballot of zoologists attending General Assemblies of IUBS or Congresses of its associated bodies such as the International Congress of Systematic and Evolutionary Biology (ICSEB). Casual vacancies may be filled between Congresses. Nominations for membership may be sent to the Commission Secretariat at any time.

The International Code of Zoological Nomenclature has one fundamental aim, which is to provide 'the maximum universality and continuity in the scientific names of animals compatible with the freedom of scientists to classify animals according to taxonomic judgments'. The Fourth Edition was published in August 1999 by the International Trust for Zoological Nomenclature, acting on behalf of the Commission; its provisions came into effect on 1 January 2000 and supersede those of the previous (1985) edition. A notice of some of the provisions, particularly those affecting the availability of new names, is given on the World Wide Web (http://www.iczn.org).

Observance of the rules in the *Code* enables a biologist to arrive at the valid name for any animal taxon between and including the ranks of subspecies and superfamily. Its provisions can be waived or modified in their application to a particular case when strict adherence would cause confusion; however, this must never be done by an individual but only by the Commission, acting on behalf of all zoologists. The Commission takes such action in response to proposals submitted to it; applications should follow the instructions in the *Bulletin of Zoological Nomenclature*, and assistance will be given by the Secretariat.

The *Bulletin* is published four times each year (subscription for volume 57 for 2000 is £110 or $200). It contains applications for Commission action, as described above; their publication is an invitation for any person to contribute comments or

counter-suggestions, which may also be published. The Commission makes a ruling (called an Opinion) on a case only after a suitable period for comments. All Opinions are published in the *Bulletin*, which also contains articles and notes relevant to zoological nomenclature; such contributions are invited and should be sent to the Secretariat.

The Commission's rulings are summarised in *The Official Lists and Indexes of Names and Works in Zoology*; a single volume covering the period 1895–1985 was published in 1987 (price £60 or $110).

In addition to dealing with applications and other formal matters, the Commission's Secretariat is willing to help with advice on any question which may have nomenclatural (as distinct from purely taxonomic) implications.

The International Trust for Zoological Nomenclature is a charity (not-for-profit company) registered in the U.K. The Secretariat of the Commission is based in London, and the Trust is established there to handle the financial affairs of the Commission. The sale of publications covers less than half of the costs of the service given to zoology by the Commission. Support is given by academies, research councils, institutions and societies from a number of countries, and also by individuals; despite this assistance the level of income remains a severe restraint. Donations to the Trust are gratefully received and attention is drawn to the possible tax advantage of legacies.

For a more detailed discussion of the Commission and its activities and publications see BZN **48**: 295–299 (December 1991). A Centenary History of the Commission — *Towards Stability in the Names of Animals* — describes the development of zoological nomenclature and the role of the Commission; it was published in 1995 (price £30 or $50).

Copies of the books listed above may be ordered from: ITZN, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk) or AAZN, MRC-159, National Museum of Natural History, Washington, D.C. 20560–0159, U.S.A. (e-mail: smithd@nmnh.si.edu). Details of discounts available are given on page 5 of this issue of the *Bulletin*.

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International Trust for Zoological Nomenclature

The International Code of Zoological Nomenclature

The new and extensively revised 4th Edition of the *International Code of Zoological Nomenclature* was published in August 1999 and came into effect on 1 January 2000; it entirely supersedes the 3rd (1985) edition. Some notes about the new edition, which contains many new provisions, will be found on the Commission's Website (www.iczn.org).

The price of the 4th Edition is £40 or $65; the following discounts are offered:

Individual members of a scientific society ordering one copy for personal use are offered a discount of 25% (price £30 or $48); the name and address of the society should be given.

Individual members of the American or European Associations for Zoological Nomenclature ordering one copy for personal use are offered a discount of 40% (price £24 or $39).

Postgraduate or undergraduate students ordering one copy for personal use are offered a discount of 25% (price £30 or $48); the name and address of the student's supervisor should be given.

Institutions or agents buying 5 or more copies are offered a 25% discount (price £30 or $48 for each copy).

Prices include surface postage; for Airmail please add £2 or $3 per copy.

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Payment should accompany orders. Cheques should be made out to 'ITZN' (sterling or dollars) or to 'AAZN' (dollars only). Payment to ITZN (but not to AAZN) can also be made by credit card (Visa or MasterCard only) giving the cardholder's number, name and address and the expiry date.

Individual purchasers of the Code are offered a 50% discount on one copy of the following publications for personal use:

The Official Lists and Indexes of Names and Works in Zoology (1987) — reduced from £60 to £30 and from $110 to $55;

Towards Stability in the Names of Animals — a History of the International Commission on Zoological Nomenclature 1895–1995 (1995) — reduced from £30 to £15 and from $50 to $25;

The Bulletin of Zoological Nomenclature (the Commission's quarterly journal) — discount valid for up to 5 years; for 2000 the discounted price would be £55 or $100.

The Code is published in a bilingual volume (English and French). Official texts in a number of other languages are planned and their availability will be announced on the Commission's Website.

The linguistic appendices in the 3rd Edition have not been included in the new edition; copies of these may be obtained without charge from ITZN.

Precedence of names in wide use over disused synonyms or homonyms in accordance with Article 23.9 of the Code

In each of the following 21 cases submitted to the Commission the applicants have notified the Secretariat that the usage of the names concerned meets the requirements of Article 23.9.1 of the new Code, which came into effect on 1 January 2000; the Commission will therefore not issue rulings in these cases and they are hereby closed. In each instance the later name may continue to be used as valid, in accordance with Article 23.9.2, since it permanently takes precedence (as a *nomen protectum*) over the earlier synonym(s) or homonym(s) cited below which have not been used as valid names after 1899. In a case of objective synonymy or of homonymy the earlier but disused name (a *nomen oblitum*) must not be used as valid without referring the case to the Commission. In a case of subjective synonymy the disused name may, in the absence of any other impediment, be used as valid if it is not regarded as a synonym of the *nomen protectum* (but if some other name has had modern usage for the relevant taxon Article 23.2 should be taken into consideration, and if there is doubt the case should be referred to the Commission for advice). If it is discovered that the conditions of Article 23.9.1 are not in fact met, then under Article 23.10 the Commission must be asked to re-open the case and the prevailing usage of names must be maintained (Article 82) until a ruling has been made.

Porifera

ROSSELLIDAE Schulze, 1885 to have precedence over ASKONEMATIDAE Gray, 1872 and CRATEROMORPHIDAE Gray, 1872 (Case 3112; K.R. Tabachnick, *Institute of Oceanology, Russian Academy of Sciences, Moscow, Russia*).

The name ROSSELLIDAE Schulze, 1887 (*Report of the scientific results of the voyage of* H.M.S. Challenger *during the years 1873–76*, Zoology, vol. 21, p. 129; type genus *Rossella* Carter, 1872) takes precedence over the disused subjective synonyms ASKONEMATIDAE Gray, 1872 (*Annals and Magazine of Natural History*, (4)**9**: 458; type genus *Askonema* Kent, 1870) and CRATEROMORPHIDAE Gray, 1872 (*Annals and Magazine of Natural History*, (4)**10**: 137; type genus *Crateromorpha* Gray, 1872).

Mollusca, Gastropoda

(1) *Buccinum cinctum* Röding, [1798] (currently *Burnupena cincta*) to have precedence over *Buccinum mexicanum* Bruguière, 1789 (Case 2993; Y. Dempster, *13 Longstaff Court, Doncaster East, Melbourne, Victoria 3109, Australia*).

The specific name of *Burnupena cincta* (Röding, [1798]) (*Museum Boltenianum. Pars secunda continens conchylia*, p. 113) takes precedence over the disused objective synonym *Buccinum mexicanum* Bruguière, 1789 (*Encyclopédie Methodique*, vol. 1, p. 260).

(2) *Voluta bidentata* Montagu, 1808 (currently *Auriculinella bidentata*) to have precedence over *Voluta bidentata* Schroter, 1804 (Case 3000; F. Giusti and G. Manganelli, *Dipartimento di Biologia Evolutiva dell'Università di Siena, Via P.A. Mattioli 4, I-53100 Siena, Italy*).

The specific name of *Auriculinella bidentata* (Montagu, 1808) (*Supplement to Testacea Britannica*, p. 100, pl. 29, fig. 3) takes precedence over the disused primary homonym *Voluta bidentata* Schroter, 1804 (*Archiv für Zoologie und Zootomie*, **4**: 36).

Mollusca, Bivalvia

Spondylus princeps Broderip, 1833 to have precedence over *S. princeps* Schreibers, 1793 (Case 3014; C. Skoglund, *Santa Barbara Museum of Natural History, 2559 Pusta del Sol Road, Santa Barbara, California 93105, U.S.A.*).

The specific name of *Spondylus princeps* Broderip, 1833 (*Proceedings of the Zoological Society of London*, **1**: 4) takes precedence over the disused primary homonym *S. princeps* Schreiber, 1793 (*Versuch einer vollstandigen Conchylienkenntnis nach Linnaeus System*, vol. 2, p. 157).

Arachnida, Scorpiones

(1) *Euscorpius* Thorell, 1876 to have precedence over *Scorpius* Ehrenberg, 1829 (Case 3024; V. Fet, *Department of Biological Sciences, Marshall University, West Virginia 25755, U.S.A.*).

The name *Euscorpius* Thorell, 1876 (*Annals and Magazine of Natural History*, 4(**17**): 15) takes precedence over the disused objective synonym *Scorpius* Ehrenberg, 1829 (*Verhandlungen der Gesellschaft naturforschender Freunde zu Berlin*, **1**: 350).

(2) *Androctonus leptochelys* Ehrenberg, 1829 (currently *Buthacus leptochelys*) to have precedence over *A. macrocentrus* Ehrenberg, 1828 (Case 3030; V. Fet, *Department of Biological Sciences, Marshall University, West Virginia 25755, U.S.A.* and M.E. Braunwalder, *Frauentalweg 97, CH-8045 Zürich, Switzerland*).

The specific name of *Buthacus leptochelys* (Ehrenberg, 1829) (*Verhandlungen der Gesellschaft naturforschender Freunde zu Berlin*, **1**: 355) takes precedence over the disused subjective synonym *Androctonus macrocentrus* Ehrenberg, 1828 (Hemprich, F.G. & Ehrenberg, C.G., *Symbolae Physicae seu Icones et Descriptiones Animalium* ..., pl. 1, fig. 6).

Crustacea, Copepoda

Leptocaris Scott, 1899 to have precedence over *Leptocaris* Aurivillius, 1898 (Case 3079; R. Huys, *Department of Zoology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.*).

The name *Leptocaris* Scott, 1899 (*Report for the Fishery Board of Scotland*, **17**(3): 259) takes precedence over the disused homonym *Leptocaris* Aurivillius, 1898 (*Bihang till Konglige Svenska Vetenskaps-Akademiens Handlingar*, **24**, Afd. IV(4), 33).

Insecta, Neuroptera

Myrmecaelurus fedtschenkoi McLachlan, 1875 (currently *Lopezus fedtschenkoi*) to have precedence over *Myrmeleon conspurcatum* Kolenati, 1857 (Case 2985; V.A. Krivokhatsky, *Zoological Institute, Russian Academy of Sciences, St. Petersburg 199034, Russia*).

The specific name of *Lopezus fedtschenkoi* (McLachlan, 1875) (*Reise in Turkestan von Alexis Fedtschenko* ..., vol. 2, part 5, p. 4) takes precedence over the disused subjective synonym *Myrmeleon conspurcatum* Kolenati, 1857 (*Bulletin de la Société Impériale des Naturalistes de Moscou*, **29**(4): 502).

Insecta, Coleoptera

(1) *Catasarcus* Schönherr, 1840 to have precedence over *Festus* Macleay, 1826 (Case 3107; C.H.C. Lyal and R.T. Thompson, *Department of Entomology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.*).

The name *Catasarcus* Schönherr, 1840 (*Genera et Species Curculionidum*, **5**(2): 812) takes precedence over the disused subjective synonym *Festus* Macleay, 1826 (King, P.P., *Narrative of a survey of the intertropical and western coasts of Australia* ..., p. 445).

(2) *Rhinoncus* Schönherr, 1825 to have precedence over *Cryptorhis* Billberg, 1820 (Case 3125; E. Colonnelli, *via Nicolò Piccinino 15, I-00176 Roma, Italy*).

The name *Rhinoncus* Schönherr, 1825 (*Isis von Oken*, **9**: col. 586) takes precedence over the disused subjective synonym *Cryptorhis* Billberg, 1820 (*Enumeratio insectorum in museo Gust. Joh. Billberg*, p. 43).

Insecta, Lepidoptera

Gelechia glandulella Riley, 1871 (currently *Blastobasis glandulella*) to have precedence over *Holcocera modestella* Clemens, 1863 (Case 2997; D. Adamski, *6033 Majors Lane, Apt. 2, Columbia, Maryland 21045, U.S.A.*).

The specific name of *Blastobasis glandulella* (Riley, 1871) (*Canadian Entomologist*, **3**: 117) takes precedence over the disused subjective synonym *Holcocera modestella* Clemens, 1863 (*Proceedings of the Entomological Society of Philadelphia*, **2**: 122).

Insecta, Diptera

Musca balteata De Geer, 1776 (currently *Episyrphus balteatus*) to have precedence over *Musca cannabina* Scopoli, 1763 (Case 3027: U. Schmid, *Staatliches Museum für Naturkunde Stuttgart, Rosenstein 1, D-7019 Stuttgart, Germany*).

The specific name of *Episyrphus balteatus* (De Geer, 1776) (*Mémoires pour servir à l'histoire des insectes*, vol. 6, p. 116) takes precedence over the disused subjective synonym *M. cannabina* Scopoli, 1763 (*Entomologica carniolica* ..., p. 344).

Osteichthyes

(1) *Cichlops cyclophthalmus* Müller & Troschel, 1849 (currently *Labracinus cyclophthalmus*; Perciformes) to have precedence over *Julis horsfieldii* Valenciennes, 1839. (Case 3060; A.C. Gill, *Department of Zoology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.* and J.E. Randall, *Ichthyology Division, Bishop Museum, 1525 Bernice Street, Honolulu, Hawaii 96817–0916, U.S.A.*).

The specific name of *Labracinus cyclophthalmus* (Müller & Troschel, 1849) (*Horae Ichthyologicae. Beschreibung und Abbildung neuer Fische*, p. 24) takes precedence over the disused subjective synonym *Julis horsfieldii* Valenciennes, 1839 (Cuvier, G.L.C.F.D. & Valenciennes, A., *Histoire naturelle des poissons*, vol. 30(6), p. 486).

(2) *Ophidium maculatum* Tschudi, 1846 (currently *Genypterus maculatus*; Gadiformes) to have precedence over *Ophidium maculatum* Rafinesque, 1810. (Case 3098; M.H. Wilson, *2337 Eagle Creek Lane, Oxnard, California 93030, U.S.A.*).

The specific name of *Genypterus maculatus* (Tschudi, 1846) (*Untersuchungen über die Fauna Peruana*. Ichthyologie, p. 46) takes precedence over the disused primary homonym *Ophidium maculatum* Rafinesque, 1810 (*Indice d'ittiologia siciliana* ..., p. 38).

Reptilia, Testudines

Malaclemys littoralis rhizophorarum Fowler, 1906 (currently *M. terrapin rhizophorarum*) to have precedence over *M. tuberculifera* Gray, 1844. (Case 3108; C.H. Ernst,

Department of Biology, George Mason University, Fairfax, Virginia 22030–4444, U.S.A. and T.D. Hartsell, *Division of Amphibians and Reptiles, National Museum of Natural History, Washington D.C. 20560–0162, U.S.A.*).

The subspecific name of *Malaclemys terrapin rhizophorarum* (Fowler, 1906) (*Proceedings of the Academy of Natural Sciences of Philadelphia*, **58**: 112) takes precedence over the disused subjective synonym *M. tuberculifera* Gray, 1844 (*Catalogue of the tortoises, crocodiles and amphisbaenians in the collection of the British Museum*, p. 29).

Reptilia, Serpentes

(1) *Trigonocephalus caribbaeus* Garman, 1887 (currently *Bothrops caribbaeus*) to have precedence over *Bothrops sabinii* and *B. subscutatus* Gray, 1842. (Case 3127; W. Wüster, *School of Biological Sciences, University of Wales, Bangor LL57 2UW, U.K.*).

The specific name of *Bothrops caribbaeus* (Garman, 1887) (*Proceedings of the American Philosophical Society*, **24**: 285) takes precedence over the disused subjective synonyms *B. sabinii* and *B. subscutatus* Gray, 1842 (*Zoological Miscellany*, **2**: 47).

(2) *Coluber crucifer* Daudin, 1803 (currrently *Psammophis crucifer*) to have precedence over *C. crucifer* Shaw, 1802. (Case 3150; H.M. Smith et al., *Department of EPO Biology, University of Colorado, Boulder, Colorado 80309 0334, U.S.A.*).

The specific name of *Psammophis crucifer* (Daudin, 1803) (*Histoire naturelle, générale et particulière des reptiles ...*, vol. 7, p. 189) takes precedence over the disused primary homonym *Coluber crucifer* Shaw, 1802 (*General zoology or systematic natural history*, vol. 3, p. 482).

Aves

(1) *Dumeticola thoracica* Blyth, 1845 (currently *Bradypterus thoracicus*; Passeriformes) to have precedence over *Horornis flaviventris* Hodgson, 1845. (Case 3102; E.C. Dickinson, *The Trust for Oriental Ornithology, Flat 3, Bolsover Court, 19 Bolsover Road, Eastbourne, East Sussex, BN20 7JG, U.K.* and P.C. Rasmussen, *NHB 336 MRC 114, Smithsonian Institution, Washington D.C. 20560, U.S.A.*).

The specific name of *Bradypterus thoracicus* (Blyth, 1845 [after September]) (*Journal of the Asiatic Society of Bengal*, **14**: 584) takes precedence over the disused subjective synonym *Horornis flaviventris* Hodgson, 1845 [August] (*Proceedings of the Zoological Society of London*, **13**: 31).

(2) *Eolophus* Bonaparte, 1854 (Psittaciformes) to have precedence over *Cackatto* Lauder & Brown, 1833. (Case 3138; R. Schodde, *Australian National Wildlife Collection, CSIRO Division of Wildlife and Ecology, P.O. Box 84, Lyneham, A.C.T. 2602, Australia* and W.J. Bock, *Department of Biological Sciences, Columbia University, New York, NY 10027, U.S.A.*).

The name *Eolophus* Bonaparte, 1854 (*Revue et Magasin de Zoologie Pure et Appliquée*, (2)**6**: 155) takes precedence over the disused subjective synonym *Cackatto* Lauder & Brown, 1833 (*The Miscellany of Natural History*, vol. 1, p. 129).

(3) *Cuculus saturatus* Hodgson, 1843 (Cuculiformes) to have precedence over earlier probable synonyms. (Case 3139; I.J. Mason & R. Schodde, *Australian National Wildlife Collection, CSIRO Division of Wildlife and Ecology, P.O. Box 84, Lyneham,*

A.C.T. 2602, Australia and W.J. Bock, *Department of Biological Sciences, Columbia University, New York, NY 10027, U.S.A.*).

The specific name of *Cuculus saturatus* Hodgson, 1843 (*Journal of the Asiatic Society of Bengal*, **12**: 942) takes precedence over the disused probable synonyms *C. striatus* Drapiez, 1823 (*Dictionnaire d'Histoire Naturelle*, vol. 4, p. 570), *C. barbatus* and *C. tenuirostris* Boie, 1828 (*Bijdragen tot de Natuurkundige Wetenschappen*, **3**: 248) and *C. assimilis* Brehm, 1843 (*Isis von Oken*, **1843**: 893).

Mammalia

Manis javanica Desmarest, 1822 (Pholidota) to have precedence over *Testudo squamata* Schneider, 1783 (Case 3109; D.M. Armstrong et al., *Department of EPO Biology, University of Colorado, Boulder, Colorado 80309–0334, U.S.A.*).

The specific name of *Manis javanica* Desmarest, 1822 (*Encyclopédie Méthodique*, Zoologie: Mammalogie, p. 377) takes precedence over the disused subjective synonym *Testudo squamata* Schneider, 1783 (*Allgemeine Natürgeschichte der Schildkröten* ..., p. 340).

Case 3111

Pachycerianthus Roule, 1904 (Cnidaria, Anthozoa): proposed designation of *P. multiplicatus* Carlgren, 1912 as the type species

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Abstract. The purpose of this application is to designate *P. multiplicatus* Carlgren, 1912 as the type species of the cerianthid genus *Pachycerianthus* Roule, 1904 in place of the original type species *P. benedeni* Roule, 1904. Only the holotype has ever been assigned to the latter species; this specimen is untraceable and its description does not permit proper interpretation of the genus.

Keywords. Nomenclature; taxonomy; Cnidaria; Anthozoa; Ceriantharia; *Pachycerianthus*; *Pachycerianthus multiplicatus*; *Pachycerianthus benedeni*.

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1. The Ceriantharia are solitary tubicolous anemone-like anthozoans. Unlike the more familiar Actiniarian anemones, they possess two distinct whorls of tentacles and lack a pedal disc. Den Hartog (1977) accepted the basic classification of Carlgren (1912), but he noted (p. 237) that a revision of the group 'is badly needed'. Arai (1965) has given an extensive glossary of the anatomical terms used in the discussion and classification of the Ceriantharia.

2. Roule (1904a, p. 793) based the new genus *Pachycerianthus* on a single specimen from the Inland Sea of Japan [no depth or locality cited] which had been sent to him by J. Bell of the British Museum. Later the same year (Roule, 1904b) he published a further account of the specimen, particularly mentioning structures which he called 'aconties', and designated (p. 709) the nominal species *P. benedeni* (p. 708) based on it as the type species of *Pachycerianthus*.

3. McMurrich (1910, p. 35) revised the classification of the Ceriantharia and placed *Pachycerianthus* in the family ARACHNACTIDAE (type genus *Arachnactis* Sars, 1846). He considered that the 'aconties' mentioned by Roule were not comparable to the true acontia of the Actiniaria, but were structures later (Pax, 1914, p. 394) called acontioids. However, Carlgren (1912, p. 40) differed: he believed that the 'aconties' were craspedonemes and he allocated *Pachycerianthus* to the CERIANTHIDAE (type genus *Cerianthus* Chiaje, 1830), whose members lack acontioids. Den Hartog (1977, pp. 237–238) placed *Pachycerianthus*, as a supposed member of the CERIANTHIDAE, in the Suborder Spirularia which is diagnosed by, among other features, a 'more or less distinct' quatroseptal arrangement of the mesenteries; however, the biseptal arrangement described by Roule (1904b, p. 709) for *P. benedeni* is characteristic of the Suborder Penicillaria which contains the ARACHNACTIDAE.

4. Arai (1965, p. 207) agreed with Carlgren that in mentioning 'aconties' Roule had probably been referring to craspedonemes, but she noted that the anatomical

problems, and hence the original taxonomic meaning of *Pachycerianthus*, could only be solved by reference to the holotype of *P. benedeni*. She was unable to locate this in Paris, London or Monaco, and we have approached a total of 43 museums (a list of which has been given to the Commission Secretariat) and have been unable to find either the holotype or any other specimen assigned to *P. benedeni*. It is not easy to obtain a new specimen for designation as a neotype due to the imprecision of the original description and type locality, and the nature of the type species of *Pachycerianthus* remains obscure.

5. We propose that *P. multiplicatus* Carlgren, 1912 (p. 5) should be designated as the type species. This taxon has always been placed in the genus, the original description is clear, and the type specimens (from Trondheim and the Kattegat) still exist in the Zoologisk Museum at the University of Copenhagen. The adoption of this species as the type would preserve the understanding of *Pachycerianthus* as it has been since Carlgren (1912) and facilitate the revision of the Ceriantharia suggested by Den Hartog (1977).

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all previous fixations of type species for the nominal genus *Pachycerianthus* Roule, 1904 and to designate *P. multiplicatus* Carlgren, 1912 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Pachycerianthus* Roule, 1904 (gender: masculine), type species by designation in (1) above *Pachycerianthus multiplicatus* Carlgren, 1912;

(3) to place on the Official List of Specific Names in Zoology the name *multiplicatus* Carlgren, 1912, as published in the binomen *Pachycerianthus multiplicatus* (specific name of the type species of *Pachycerianthus* Roule, 1904).

Acknowledgements

We should like to express our thanks to the curatorial staff of the natural history museums contacted during this work, and to Dr Hiroshi Namikawa of the Natural History Museum in Tokyo.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3086

Hyalinia villae adamii Westerlund, 1886 (currently *Oxychilus adamii*; Mollusca, Gastropoda): proposed conservation of the specific name *adamii* by replacing the syntypes with a neotype

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Abstract. The purpose of this application is to conserve the current usage and understanding of the name *Oxychilus adamii* (Westerlund, 1886) for an Alpine species of pulmonate gastropod (family ZONITIDAE). The two syntypes of *O. adamii* are specimens of the congeneric, smaller species *O. mortilleti* (Pfeiffer, 1859), also from the Alpine region. It is proposed that the original type material of *O. adamii* be replaced with a neotype which accords with the established interpretation of the species.

Keywords. Nomenclature; taxonomy; Gastropoda; pulmonates; ZONITIDAE; Alps; *Oxychilus adamii*.

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1. Westerlund (1886, p. 48) introduced the nominal taxon *Hyalinia villae adamii* from 'Lombardei b. Esino' with a brief description. The name *adamii* was established for a 'variety' but it was later used as the valid name of a subspecies of *Oxychilus villae* (Pfeiffer, 1857) by Alzona (1971, p. 125), and as the name of a distinct species by Riedel (1980, p. 99; 1998, p. 48), Kerney, Cameron & Jungbluth (1983, p. 171), Turner et al. (1998, p. 275) and Kerney, Cameron & Bertrand (1999, p. 217).

2. The original type material consists of two syntypes and is kept in the Westerlund collection (no. 124) at the Naturhistoriska Museet, Göteborg, Sweden. The type locality 'Esino' as reported by Westerlund (1886; para. 1 above) differs from that given on the label accompanying the type material, which reads 'Italia, Edolo'. However, L. Forcart (unpublished) noted that 'Esino' was 'Esine', a small village near Edolo in Val Camonica, not 'Esino Lario', a locality near the Lake of Lecco. We consider that Forcart was correct because G.B. Adami, who sent the material to Westerlund, spent a period in Val Camonica and devoted a paper to the molluscs of this valley (Adami, 1876). In the 1876 paper Adami frequently mentioned 'Esine', though he only collected specimens of *Hyalina cellaria* Müller, 1774 there and not of *H. villae*.

3. The syntypes in Göteborg are not conspecific with *Oxychilus adamii* as interpreted by authors since the name was adopted for a species-group taxon (see paras. 1 and 5), but with the congeneric, smaller and less flat species *O. mortilleti* (Pfeiffer, 1859), also from the Alpine region (see our paper, Giusti & Manganelli, 1999). This was also ascertained by A. Riedel (Warsaw, Poland) in 1968, as demonstrated by his hand written label accompanying the syntypes. In an unpublished revision the late L. Forcart was responsible for misinterpreting the name

Hyalinia villae adamii, despite the fact that he had examined Westerlund's syntypes. This misinterpretation was later adopted by Riedel (1980), who noted 'Anatomie von Forcart und Riedel untersucht, nicht publiziert' ['Anatomy studied by Forcart and Riedel, not published'], and unknowingly by Kerney, Cameron & Jungbluth (1983). Although we became aware of the misinterpretation in 1984 we preferred to maintain Westerlund's name for the species (see Manganelli, Bodon, Favilli & Giusti, 1995). The two species are placed in distinct subgenera, *O.* (*Mediterranea*) *adamii* and *O.* (*Oxychilus*) *mortilleti*.

4. Recognition of the syntypes of *Oxychilus adamii* (Westerlund, 1886) as specimens of *O. mortilleti* (Pfeiffer, 1859) results in the specific name *adamii* becoming a junior subjective synonym of *mortilleti* and, in the absence of a Commission ruling, a new name would be required for the taxon called *adamii* in recent decades. In order to conserve the name *adamii* in the current sense we propose that the type status of the two syntypes should be set aside, and that a neotype be designated in accord with the accepted use of the name. The proposed neotype was collected in Val Seriana, Valle Asnina, at 400–500 metres above sea level (municipality of Cene, province of Bergamo, Italy, UTM References 32T NR 6671) and is in the Museo Zoologico de 'La Specola', Sezione del Museo di Storia Naturale dell'Università di Firenze, Italy, specimen no. MZUF 13735. It was not possible to collect a specimen for neotype selection from the original type locality, the Val Camonica, because this is outside the known range of *Oxychilus adamii* as currently understood. A complete description and illustrations of *O. adamii* and of the proposed neotype specimen have been given by us (Giusti & Manganelli, 1999).

5. In May 1998 Dr Adolf Riedel (*Museum and Institute of Zoology, Polish Academy of Sciences, Warszawa, Poland*) wrote (in litt.): 'I strongly support this application, which is in accord with the Code in that it promotes stability in the usage of a name. The name *Oxychilus adamii*, in the sense of Alzona (1971), Kerney, Cameron & Jungbluth (1983) and myself (Riedel, 1980), should be conserved for the sake of stability. The name was not used during the last years of the 19th century and the first half of the 20th century. In the second half of the 20th century it has been used only in the sense of Forcart, and never in the sense of the original publication by Westerlund (1886)'.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all previous type fixations for the nominal species *Hyalinia adamii* Westerlund, 1886 and to designate as neotype the specimen no. MZUF 13735 in the Museo Zoologico de 'La Specola', Sezione del Museo di Storia Naturale dell'Università di Firenze, Italy;

(2) to place on the Official List of Specific Names in Zoology the name *adamii* Westerlund, 1886, as published in the trinomen *Hyalinia villae adamii* and as defined by the neotype designated in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 2926

Trichia Hartmann, 1840 (Mollusca, Gastropoda): proposed conservation; and TRICHIINAE Ložek, 1956 (Mollusca): proposed emendation of spelling to TRICHIAINAE, so removing the homonymy with TRICHIIDAE Fleming, 1821 (Insecta, Coleoptera)

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Abstract. There are two purposes for this application. The first is to conserve the name *Trichia* Hartmann, 1840 for a genus of European pulmonate gastropod molluscs (family HYGROMIIDAE). The name is currently much in use but is a junior synonym of the disused name *Trochulus* Alten, 1812 and a junior homonym of *Trichia* De Haan, 1839 in Crustacea (Brachyura, Indo-West Pacific crabs). It is proposed that the name *Zalasius* Rathbun, 1897, which was used as a replacement name for *Trichia* De Haan for a period, should be adopted as valid for the crustacean genus. ZALASIINAE Serène, 1968, based on *Zalasius*, becomes the valid name for the crustacean family-group taxon. The second purpose is to remove the homonymy between the family-group names TRICHIIDAE Fleming, 1821 (Coleoptera, Palaearctic dung beetles) and TRICHIINAE Ložek, 1956 (Gastropoda) by emending the stem of the name *Trichia* Hartmann, 1840, on which the molluscan name is based, to give TRICHIAINAE.

Keywords. Nomenclature; taxonomy; Gastropoda; Crustacea; Coleoptera; HYGROMIIDAE; Brachyura; SCARABAEIDAE; TRICHIIDAE; TRICHIAINAE; ZALASIINAE; pulmonates; crabs; beetles; *Trichia*; *Zalasius*; *Trichius*.

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1. De Haan (1841, pp. 109–110) described the new brachyuran (crab) genus *Trichia*, containing the single new species *T. dromiaeformis*, in the fifth fascicle of the crustacean volume of von Siebold's *Fauna Japonica*. He placed the genus in the new family Trichidea, the spelling of which was corrected to TRICHIIDAE by Ortmann (1893, p. 419). In 1953 Holthuis (pp. 36 47) showed that the two plates (pl. 29, fig. 4, ♂ and ♀; pl. H) illustrating De Haan's description of *Trichia dromiaeformis* appeared in the fourth fascicle of the work, which was published in 1839. On both plates the new generic and specific names were given in the legend, and pl. H also carried the family name. All three names thus date from 1839.

2. A second species of *Trichia* De Haan, 1839 was described in 1906, and between 1938 and 1969 four more species were established in the genus. The name *Trichia* was universally used in the Crustacea until about 1930. Rathbun (1897, p. 166) proposed the replacement name *Zalasius*, believing *Trichia* De Haan to be preoccupied by the scarabaeid beetle name *Trichius* Fabricius, 1775 (see para. 9 below), but her action was mostly ignored. In 1930 Iredale (p. 175) considered *Trichia* De Haan to be a junior homonym of *Trichia* Hartmann, 1840 in Mollusca (see para. 3 below) as he

thought 1841 was the publication date of De Haan's genus; he proposed the replacement name *Macneillena*. In the same year, McNeill & Ward (1930, pp. 374–375) noted that *Zalasius* Rathbun, 1897 was a senior objective synonym of *Macneillena* Iredale, 1930 and adopted the name *Zalasius* for the genus. They were almost immediately followed in this by other carcinologists and the four species described between 1938 and 1969 were all established in *Zalasius*. This was the name almost universally used until Guinot (1976, pp. 109–110), in her history of the genus, realised that *Trichia* De Haan was published in 1839 and was senior to *Trichia* Hartmann, 1840; she therefore reintroduced De Haan's name. Guinot (1976) recorded that the taxonomic position of the genus had hitherto been uncertain and she assigned it to the subfamily TRICHIINAE of the family XANTHIDAE. Serène (1968, p. 62) had earlier introduced the name ZALASIINAE for the subfamily in which he placed *Zalasius* Rathbun.

3. In Mollusca the genus *Trichia* was proposed by Hartmann (1840; see Heppell, 1966 for the dates of publication of Hartmann's work) and applies to a group of European species of HYGROMIIDAE, some of which are among the most common European pulmonate gastropod species. Under Article 12.2.5 of the Code the name *Trichia* Hartmann is available from 1840 (p. xiii, footnote) by the inclusion of two nominal species, one of which was *Helix hispida* Linnaeus, 1758 (p. 771). On p. 41 (1841) Hartmann described the genus. Herrmannsen (1849, p. 587) designated *H. hispida* as the type species of *Trichia* Hartmann. *Trichia hispida* (Linnaeus, 1758) is widespread and fairly common in natural and disturbed habitats. Other relatively common species now included in *Trichia* Hartmann are *T. sericea* (Draparnaud, 1801), *T. striolata* (C. Pfeiffer, 1828) and *T. villosa* (Draparnaud, 1805). About 15 additional European species of *Trichia* sensu stricto are referred to in the literature; if the genus is interpreted more widely, which is usually the case, the number of species increases with a further 10 taxa (see Kerney & Cameron, 1979; Kerney, Cameron & Jungbluth, 1983). The subfamily name TRICHIINAE, based on *Trichia* Hartmann, was introduced by Ložek (1956, p. 200).

4. The earlier use of the name *Fruticicola* Held, 1837 for *Helix hispida* Linnaeus, 1758 and its allies came to an end with the publication of Thiele's (1931) *Handbuch der systematischen Weichtierkunde*, and Zilch's (1960) treatment of the Euthyneura. Zilch (p. 642) indicated that *Fruticicola* has to be classified with the family HELICIDAE, subfamily BRADYBAENINAE. The type species of the genus, designated by Herrmannsen (1847, p. 450), is *Helix fruticum* O.F. Müller, 1774.

5. The oldest synonym of *Trichia* Hartmann, 1840 (Mollusca) is *Trochulus*, a name first introduced by Chemnitz (1786, p. 52, pl. 122, figs. 1057, 1058). Alten (1812, p. 44, pl. 3, fig. 6) included *Trochulus* in the synonymy of *Helix hispida* Linnaeus, 1758. The name *Trochulus* appeared, also in synonymy, in Férussac (1821, p. 44 (quarto)/p. 48 (folio)), Beck (1837, p. 20), Gray (1847, p. 173) and H. & A. Adams (1855, p. 214). The first use of *Trochulus* sensu Chemnitz as a valid name was by Lindholm (1927, p. 122), who credited it to Chemnitz and proposed the family name TROCHULINAE, but in Direction 1 (April 1954) Chemnitz's work was rejected by the Commission as non-binominal and placed on the Official Index. *Trochulus* has occasionally been used as the valid name for the mollusc genus during the 20th century (see Kennard, 1943, p. 118 and Janus, 1958). However, it was used less than 10 times between 1946 and 1958, and after 1958 it has been completely replaced

by *Trichia* Hartmann (including the subsequent editions of 1965, 1968 and 1982 of Janus's work). The name *Trochulus* would not have been available from Alten (1812) under the 1961 Code but, following the introduction of Article 11d in the 1964 Code (Article 11.6.1 of the current Code), Alten's (1812) mention of the name in synonymy and its adoption by some later authors retrospectively rendered the name available from this author and date, with *Helix hispida* (Linnaeus, 1758) as the type species. I propose that the disused name *Trochulus* Alten, 1812 be suppressed.

6. In 1848, Gistel (p. xi) incorrectly (in terms of modern Codes) thought that *Trichia* Hartmann, 1840 (Mollusca) was a junior homonym of the scarabaeid beetle name *Trichius* Fabricius, 1775 (see also paras. 2 and 9) and proposed the replacement name *Erethismus*. To the best of my knowledge *Erethismus* has never been adopted and is completely unknown in the literature.

7. The name *Trichia* Hartmann, 1840 is widely used in molluscs for many species, some of which are very common, in a well investigated area. To introduce its synonym *Trochulus*, which has not been recognised for more than 40 years, would result in a generic name which is wholly unfamiliar to most current malacologists and would cause nomenclatural confusion in numerous molluscan species. Such a change would serve no purpose and would render a disservice to all those with an interest in malacology; it would also affect those working in applied fields such as biology, ecology and conservation. Not all workers would accept the change and, as a result, there would be two names simultaneously in use for the genus. In contrast, the genus *Trichia* De Haan, 1839 (Crustacea) includes few species (about six), all of which are rather rare and occur in a relatively poorly studied region (the Indo-West Pacific), and consequently the literature on them is not extensive. The replacement name for the crustacean genus, *Zalasius* Rathbun, 1897, was consistently used for over 40 years (1930–1976; see para. 2 above). It seems that greater harm would be done by keeping the name *Trichia* in Crustacea than if it is retained in Mollusca. Dr Danièle Guinot (*Laboratoire de Zoologie (Arthropodes), Muséum National d'Histoire Naturelle, Paris*) and Dr P.K.L. Ng (*Zoology Department, National University of Singapore*), who have both been working with the crustacean genus and continue to do so, have said (in litt.) that they would not object to the reintroduction of the name *Zalasius*. In 1966 Holthuis (pp. 122–124) proposed that it be universally adopted, together with the family name ZALASIIDAE Serène, 1968. I therefore propose that *Trichia* De Haan, 1839 (Crustacea) be suppressed to conserve *Trichia* Hartmann, 1840 (Mollusca).

8. In passing I note that the new genus of Chinese Eocene dipteran named *Trichia* by Hong (1981, p. 28) was subsequently renamed *Iyaiyai* by Evenhuis (1994).

9. The insect family-group name TRICHIIDAE Fleming, 1821 (p. 50, published as Trichiadae) was based on the scarabaeid beetle genus *Trichius* Fabricius, 1775 (p. 40). The genus had seven originally included species, among them *Scarabaeus fasciatus* Linnaeus, 1758 (p. 352) from Europe, the type species by subsequent designation by Latreille (1810, p. 428). The name TRICHIIDAE is well used at family, subfamily (as a division of CETONIIDAE or SCARABAEIDAE) and tribal levels. A search of *Zoological Record on CD*, vols. 115–135 (for 1978–1999), showed 42 publications in which TRICHIIDAE Fleming has been used. During the same period the molluscan subfamily name TRICHIINAE Ložek, 1956 (based on *Trichia* Hartmann, 1840) has been used only once (see Pazylov & Schileyko, 1992). I believe that there

is good reason not to change the insect name. I therefore propose that the molluscan name be emended to TRICHIAINAE, while leaving the insect name TRICHIIDAE Fleming, 1821 unaltered.

10. The name *Trichia* was introduced by von Haller, 1768 (pp. 114–116, 190, pl. 48) for 13 species of 'fungi'. It was adopted by Hoffman (1790), who referred to von Haller's work and illustrations, and is now in use for a well known genus of Myxomycetes or Mycetozoa (slime fungi or slime moulds). This is a group of protistan organisms which until recently were treated as fungi (see Stephenson & Stempen, 1994) and their study has been, and still is, carried out by botanists, particularly mycologists. The names used in this group can come within the scope of the Code of botanical nomenclature and that of zoological nomenclature (see Loeblich & Tappan, 1964; Corliss, 1995), but are nearly always dealt with under the former. *Trichia* von Haller is based on the type species *Trichia varia* (Persoon, 1794) (p. 90), described from Germany, and is the basis of a family established by Fries (1821, p. L) as the group Trichocisti in the Trichioidei, which is usually cited as Trichiaceae (see, for example, MacBride & Martin, 1934; Martin & Alexopoulos, 1969; Stephenson & Stempen, 1994) but occasionally as TRICHIIDAE. The order Trichiales contains the Trichiaceae and related taxa. The generic name *Trichia* von Haller is in wide use in the Myxomycetes without ambiguity or any confusion with animal taxa and there is no case for treating the name as competing in homonymy with *Trichia* Hartmann in Mollusca; to do so would simply cause confusion.

11. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power:
  (a) to suppress the following names:
    (i) *Trochulus* Alten, 1812 (Mollusca) for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
    (ii) *Trichia* De Haan, 1839 (Crustacea) for the purposes of both the Principle of Priority and the Principle of Homonymy;
  (b) to rule that the name *Trichia* Hartmann, 1840 (Mollusca) is not rendered invalid by the existence of *Trichia* von Haller, 1768 in Myxomycetes;
  (c) to rule that for the purposes of Article 55.3.1 of the Code the stem of the generic name *Trichia* Hartmann, 1840 (Mollusca) is TRICHIA-;
(2) to place on the Official List of Generic Names in Zoology the following names:
  (a) *Trichia* Hartmann, 1840 (gender: feminine), type species by subsequent designation by Herrmannsen (1849) *Helix hispida* Linnaeus, 1758 (Mollusca);
  (b) *Zalasius* Rathbun, 1897 (gender: masculine), type species by monotypy of the replaced nominal genus *Trichia* De Haan, 1839, *Trichia dromiaeformis* De Haan, 1839 (Crustacea);
  (c) *Trichius* Fabricius, 1775 (gender: masculine), type species by subsequent designation by Latreille (1810) *Scarabaeus fasciatus* Linnaeus, 1758 (Coleoptera);
(3) to place on the Official List of Specific Names in Zoology the following names:
  (a) *hispida* Linnaeus, 1758, as published in the binomen *Helix hispida* (specific name of the type species of *Trichia* Hartmann, 1840) (Mollusca);

(b) *dromiaeformis* De Haan, 1839, as published in the binomen *Trichia dromiaeformis* (specific name of the type species of *Zalasius* Rathbun, 1897) (Crustacea);

(c) *fasciatus* Linnaeus, 1758, as published in the binomen *Scarabaeus fasciatus* (specific name of the type species of *Trichius* Fabricius, 1775) (Coleoptera);

(4) to place on the Official List of Family-Group Names in Zoology the following names:

(a) TRICHIIDAE Fleming, 1821, type genus *Trichius* Fabricius, 1775 (Coleoptera);

(b) TRICHIAINAE Ložek, 1956, type genus *Trichia* Hartmann, 1840 (spelling emended by the ruling in (1)(c) above) (Mollusca);

(c) ZALASIINAE Serène, 1968, type genus *Zalasius* Rathbun, 1897 (Crustacea);

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:

(a) *Trochulus* Alten, 1812 (suppressed in (1)(a)(i) above) (Mollusca);

(b) *Trichia* De Haan, 1839 (suppressed in (1)(a)(ii) above) (Crustacea);

(c) *Erethismus* Gistel, 1848 (a junior objective synonym of *Trichia* Hartmann, 1840) (Mollusca);

(d) *Macneillena* Iredale, 1930 (a junior objective synonym of *Trichia* De Haan, 1839 and of *Zalasius* Rathbun, 1897) (Crustacea);

(e) *Trichia* Hong, 1981 (a junior homonym of *Trichia* De Haan, 1839 and of *Trichia* Hartmann, 1840) (Diptera);

(6) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the following names:

(a) TROCHULINAE Lindholm, 1927 (invalid because the name of the type genus, *Trochulus* Alten, 1812, has been suppressed in (1)(a)(i) above) (Mollusca).

(b) TRICHIIDAE De Haan, 1839 (invalid because the name of the type genus, *Trichia* De Haan, 1839, has been suppressed in (1)(a)(ii) above) (Crustacea);

(c) TRICHIINAE Ložek, 1956 (spelling emended to TRICHIAINAE by the ruling in (1)(b) above) (Mollusca);

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3119

VACHONIAINAE Maury, 1973 (Arachnida, Scorpiones): proposed conservation as the correct spelling to remove homonymy with VACHONIIDAE Chamberlin, 1947 (Arachnida, Pseudoscorpiones)

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Abstract. The purpose of this application is to remove the homonymy between two arachnid family-group names, VACHONIIDAE Chamberlin, 1947 (Pseudoscorpiones; type genus *Vachonium* Chamberlin, 1947) and VACHONIINAE Maury, 1973 (Scorpiones; type genus *Vachonia* Abalos, 1954). It is proposed that the entire generic name of *Vachonia* should be adopted as the stem, so that the correct spelling of the scorpion subfamily name will be VACHONIAINAE Maury, 1973.

Keywords. Nomenclature: taxonomy; Arachnida; Pseudoscorpiones; Scorpiones; BOTHRIURIDAE; VACHONIAINAE; VACHONIIDAE; *Vachonia*; *Vachonium*.

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1. Chamberlin (1947, p. 3) based the pseudoscorpion family VACHONIIDAE on his simultaneously established nominal genus *Vachonium* (p. 4; type species *Vachonium boneti* Chamberlin, 1947 (p. 6) by original designation). This family is in general use, and currently includes two genera and 12 species (Harvey, 1990).

2. Maury (1973, p. 30) published the scorpion subfamily name VACHONIANINAE [sic], based on *Vachonia* Abalos, 1954 (p. 119, type species *Vachonia martinezi* Abalos, 1954 (p. 120) by original designation, family BOTHRIURIDAE Simon, 1880). Like *Vachonium*, *Vachonia* was derived from the name of the French arachnologist Max Vachon (1908–1991). The name VACHONIANINAE is an incorrect original spelling of VACHONIINAE, since under the Code (Article 29.3 of the 1999 edition) the grammatical stem of *Vachonia* is Vachoni- and not Vachonian-. However, VACHONIINAE cannot be used for a scorpion taxon because (with change of suffix) it is a junior homonym of the pseudoscorpion name VACHONIIDAE Chamberlin, 1947 (para. 1 above). Maury's name has been used (Francke, 1982; Sissom, 1990); although at subfamily rank it has recently been synonymized with the nominotypical subfamily BOTHRIURINAE by Maury himself (Acosta & Maury, 1998, p. 559; see also Lowe, 2000), elimination of the homonymy is necessary for use at any rank (such as tribe) and the case is referred to the Commission for a ruling under Article 55.3. In accordance with Recommendation 29A of the Code we propose that the entire generic name *Vachonia* should be used as the grammatical stem, so that Maury's

name should be spelled VACHONIAINAE and thus not be a junior homonym of VACHONIIDAE Chamberlin.

3. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to rule that for purposes of Article 55·3·1 of the Code the stem of the generic name *Vachonia* Abalos, 1954 (Arachnida, Scorpiones) is VACHONIA-;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Vachonia* Abalos, 1954 (gender: feminine), type species *Vachonia martinezi* Abalos, 1954 by original designation;
   (b) *Vachonium* Chamberlin, 1947 (gender: neuter), type species *Vachonium boneti* Chamberlin, 1947 by original designation;

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *martinezi* Abalos, 1954, as published in the binomen *Vachonia martinezi* (specific name of the type species of *Vachonia* Abalos, 1954);
   (b) *boneti* Chamberlin, 1947, as published in the binomen *Vachonium boneti* (specific name of the type species of *Vachonium* Chamberlin, 1947);

(4) to place on the Official List of Family-Group Names in Zoology the following names:
   (a) VACHONIAINAE Maury, 1973 (type genus *Vachonia* Abalos, 1954 (correct spelling of VACHONIANINAE by the ruling in (1) above);
   (b) VACHONIIDAE Chamberlin, 1947 (type genus *Vachonium* Chamberlin, 1947);

(5) to place on the Offical Index of Rejected and Invalid Family-Group Names in Zoology the name VACHONIANINAE Maury, 1973 (an incorrect original spelling of VACHONIAINAE).

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3120

ISCHNURAINAE Fraser, 1957 (Insecta, Odonata): proposed conservation as the correct spelling of ISCHNURINAE to remove homonymy with ISCHNURIDAE Simon, 1879 (Arachnida, Scorpiones)

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Abstract. The purpose of this application is to remove the homonymy between the damselfly subfamily name ISCHNURINAE Fraser, 1957 (type genus *Ischnura* Charpentier, 1840; family COENAGRIONIDAE) and the scorpion family name ISCHNURIDAE Simon, 1879 (type genus *Ischnurus* C.L. Koch, 1837, a junior subjective synonym of *Liocheles* Sundevall, 1833). It is proposed that the entire generic name of *Ischnura* should be adopted as the stem, so that the correct spelling of the damselfly subfamily will be ISCHNURAINAE Fraser, 1957.

Keywords. Nomenclature; taxonomy; Odonata; Scorpiones; COENAGRIONIDAE; ISCHNURAINAE; ISCHNURINAE; ISCHNURIDAE; *Ischnura*; *Ischnurus*; *Liocheles*; damselflies; scorpions.

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1. The scorpion family name ISCHNURIDAE was based by Simon (1879, p. 92) on the type genus *Ischnurus* C. L. Koch, 1837 (p. 69). This name has been widely used at family rank (e.g. Kraepelin, 1913; Tikader & Bastawade, 1983; Francke, 1985); although the taxon has sometimes been regarded as a subfamily of SCORPIONIDAE Latreille, 1802 its treatment as a separate family is now generally accepted (see Sissom, 1990 and Fet, 2000).

2. None of the recent authors who have used the name ISCHNURIDAE in scorpion taxonomy has noticed the fact (Fet, 2000, p. 383) that it is based on a junior generic synonym. This synonymy was noted indirectly by two authors: Karsch (1880, p. 408), who synonymized *Hormurus* Thorell, 1876 with *Liocheles* Sundevall, 1833 (p. 31), and Pocock (1902, p. 364), who synonymized *Hormurus* with *Ischnurus* C.L. Koch, 1837. *Liocheles* (type species by monotypy *Scorpio australasiae* Fabricius, 1775 (p. 399)) is the generic name currently used (e.g. L.E. Koch, 1977; Tikader & Bastawade, 1983; Francke, 1985; Lourenço, 1989; Sissom, 1990), but ISCHNURIDAE (or ISCHNURINAE) is in general use and under the Code (Article 40.1 of the 1999 edition) there is no need to create a new name 'LIOCHELIDAE'.

3. The damselfly subfamily name ISCHNURINAE Fraser, 1957 (p. 49; Odonata, family COENAGRIONIDAE) is based on the genus *Ischnura* Charpentier, 1840 (p. 20; type

species *Agrion elegans* Van der Linden, 1823 (p. 104) by the subsequent designation of Selys-Longchamps (1850, p. 182)). This well-known genus not only includes common species of damselflies throughout the Nearctic and Palaearctic, but probably represents the most truly cosmopolitan genus of Zygoptera, occurring almost wherever Odonata are found (Westfall & May, 1996). The name ISCHNURINAE Fraser, 1957 has no synonyms and has been widely used (always at subfamily rank) in taxonomic works on Odonata (see for example Davies & Tobin, 1984 and Bridges, 1994).

4. Under Article 55.3.1 of the Code the homonymy between ISCHNURIDAE Simon, 1879 (for scorpions) and ISCHNURINAE Fraser, 1957 (for damselflies) must be referred to the Commission. In accordance with Recommendation 29A we propose that the entire generic name *Ischnura* should be used as the grammatical stem, so that the damselfly subfamily name would be ISCHNURAINAE and the homonymy would be removed.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to rule that for purposes of Article 55·3·1 of the Code the stem of the generic name *Ischnura* Charpentier, 1840 (Insecta, Odonata) is ISCHNURA-;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Ischnura* Charpentier, 1840 (gender: feminine), type species *Agrion elegans* Van der Linden, 1823 by subsequent designation by Selys-Longchamps (1850);
   (b) *Liocheles* Sundevall, 1833 (gender: masculine), type species *Scorpio australasiae* Fabricius, 1775 by monotypy;

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *elegans* Van der Linden, 1823, as published in the binomen *Agrion elegans* (specific name of the type species of *Ischnura* Charpentier, 1840);
   (b) *australasiae* Fabricius, 1775, as published in the binomen *Scorpio australasiae* (specific name of the type species of *Liocheles* Sundevall, 1833);

(4) to place on the Official List of Family-Group Names in Zoology the following names:
   (a) ISCHNURAINAE Fraser, 1957 (type genus *Ischnura* Charpentier, 1840) (correct original spelling of ISCHNURINAE by the ruling in (1) above);
   (b) ISCHNURIDAE Simon, 1879 (type genus *Ischnurus* C.L. Koch, 1837, a junior subjective synonym of *Liocheles* Sundevall, 1833).

(5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name ISCHNURINAE Fraser, 1957 (spelling emended to ISCHNURAINAE by the ruling in (1) above).

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Case 3113

Betta Bleeker, 1850 (Osteichthyes, Perciformes): proposed conservation of specific names by the suppression of *Micracanthus marchei* Sauvage, 1879

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Abstract. The purpose of this application is to conserve the specific names of 'fighting fishes' which belong to the Southeast Asian genus *Betta* Bleeker, 1850 (family OSPHRONEMIDAE (or BELONTIIDAE or ANABANTIDAE)). The name *Micracanthus marchei* Sauvage, 1879 was given to a taxon supposedly from West Africa, but the poorly preserved holotype (and only specimen) clearly belongs to *Betta*. *M. marchei* has been suggested to be a senior synonym of *B. splendens* Regan, 1910, but the holotype more closely resembles *B. smaragdina* Ladiges, 1972, *B. imbellis* Ladiges, 1975 or a newly discovered species from Cambodia. It is proposed that the unused name *M. marchei* should be suppressed to conserve the specific names of the *Betta* species.

Keywords. Nomenclature; taxonomy; Osteichthyes; Perciformes; OSPHRONEMIDAE; *Betta*; *Betta splendens*; *Betta smaragdina*; *Betta imbellis*; *Micracanthus marchei*; fighting fishes; Southeast Asia.

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1. Sauvage (1879) described a new genus and species, *Micracanthus marchei*, on the basis of a single specimen said to be from Doumé, in the 'pays des Okandas, haut Ogôoué' in Gabon, West Africa; the species was named after the explorer Alfred Marche who had supposedly collected it in that area. Roberts (1981, p. 91) examined the holotype of *M. marchei*; he concluded that it is a specimen of the extremely well-known Southeast Asian 'fighting fish' *Betta splendens* Regan, 1910 (p. 782), and that Sauvage had wrongly attributed it to Africa (as he also did when establishing the name of a tetraodontid species *Chonerhinos africanus* in the same paper). Roberts mentioned Article 23 of the then current Code, and pointed out that because of its very wide usage the specific name of *B. splendens* should not be displaced by *marchei*. The synonymy of *M. marchei* and *B. splendens* was recorded by Eschmeyer (1998, p. 1015). There is indeed no doubt (see Tan & Ng, in press) that *Micracanthus* Sauvage, 1879 (p. 95) is a junior subjective synonym of *Betta* Bleeker, 1850 (p. 12, type species by monotypy *B. trifasciata* Bleeker, 1850), a genus confined to Southeast Asia. Jordan (1919, p. 342) provided the replacement name *Oshimia* for *Micracanthus* because of its supposed homonymy with *Microcanthus* Swainson, 1839 (KYPHOSIDAE), but he did not comment on its taxonomic identity. Neither *Micracanthus* nor *Oshimia* have ever been used as valid names and both are later than *Betta*.

2. Roberts (1981) commented that since the type specimen of *Micracanthus marchei* was [in his opinion] conspecific with *Betta splendens*, it was originally

collected from Thailand or Peninsular Malaysia and not by Marche in Africa. Although it was not discussed by Roberts, the problem with *Micracanthus marchei* is actually more complex at the species level, since *B. splendens* belongs to a species-group which also includes *B. smaragdina* Ladiges, 1972 (p. 190) and *B. imbellis* Ladiges, 1975 (p. 262) (see Schaller & Kottelat, 1990; Witte & Schmidt, 1992; Tan & Ng, in press). In addition, we (Tan & Ng, in press) have recently obtained specimens of a fish belonging to this species-group from the Mekong basin in Cambodia; these represent a taxon which can be distinguished from congeners by meristic counts and the distinctive colour pattern of its fins. All these species fit Sauvage's (1879, p. 96) description of *M. marchei*.

3. The *Betta splendens* species-group is widely distributed in Southeast Asia (see Tan & Ng, in press). These fishes are not only commercially important in the aquarium trade, but have also been used as environmental bioindicators. *Betta splendens*, especially, has had a very long history in the ornamental fish trade, and for several hundred years has been domesticated and specially bred in Southeast Asia for use in fighting tournaments (see Smith, 1945). There are currently numerous breeds available, not only for combat but for the general ornamental fish trade. *B. smaragdina* and *B. imbellis* are also widely utilised for this trade.

4. A re-examination of the holotype of *Micracanthus marchei* Sauvage, 1879, a somewhat shrivelled specimen 34.7 mm in standard length (Muséum National d'Histoire Naturelle, Paris, catalogue number MNHN A.964), shows that it is morphologically closer to *B. smaragdina* and *B. imbellis* than to *B. splendens*; it is also very similar to specimens of the new species from Cambodia mentioned above. *M. marchei* may be conspecific with any of these species of *Betta*, but because of the poor condition of the holotype and its lack of true locality data its specific identity cannot be ascertained.

5. We propose that the name *Micracanthus marchei* be suppressed due to the totally misleading 'African' locality data, the lack of use of the name, and because of the potential threat to the specific names of species of *Betta*, of which several are well-known outside specialist literature. The name of *B. splendens* could be given precedence over *M. marchei* by invoking Article 23.9 of the new Code, without seeking a Commission ruling, but this would not apply to all the *Betta* species whose names might be synonyms of *M. marchei*. Although *Micracanthus* is junior to *Betta* and has never been used, we suggest that it would be in the interest of nomenclatural stability if it were suppressed at the same time as the name of the only included species, particularly since no such taxonomic genus occurs in Africa.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to suppress the generic and specific names of *Micracanthus marchei* Sauvage, 1879 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Micracanthus* Sauvage, 1879, as suppressed in (1) above;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *marchei* Sauvage, 1879, as published in the binomen *Micracanthus marchei* and as suppressed in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3134

Rana cryptotis Boulenger, 1907 (currently *Tomopterna cryptotis*; Amphibia, Anura): proposed precedence of the specific name over that of *Chiromantis kachowskii* Nikolsky, 1900

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Abstract. The purpose of this application is to conserve the specific name of *Tomopterna cryptotis* (Boulenger, 1907) for a very common and widespread species of burrowing or sand frog (family RANIDAE) from much of sub-Saharan Africa. It is proposed that the name be given conditional precedence over the little used *Chiromantis kachowskii* Nikolsky, 1900.

Keywords. Nomenclature; taxonomy; Amphibia; Anura; RANIDAE; burrowing frogs; sand frogs; Africa; *Chiromantis kachowskii*; *Tomopterna cryptotis*.

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1. Nikolsky (1900, p. 246) described *Chiromantis kachowskii* (by implication a species in the family RHACOPHORIDAE) based upon two specimens obtained on 21 July 1898 at Ferad in Abyssinia (now Ethiopia, at approximately 10° 49′ N, 42° 42′ E). These had been donated by the collector, G.V. Kakhovsky, to the Zoological Museum (now the Zoological Institute of the Russian Academy of Sciences) in St Petersburg and given the accession number 2077.

2. We have recently examined specimens labelled ZISP 2077.1–2 and found them to be representatives of a taxon that, for at least the past 20 years, has been called *Tomopterna cryptotis* (family RANIDAE), a species erected by Boulenger (1907, p. 109) for material collected in Angola and originally named *Rana cryptotis*. Syntypes of this species are in the amphibian collections of the Natural History Museum, London.

3. Nikolsky's (1900) account of *Chiromantis kachowskii* includes phrases that accurately describe the coloration and 'tuberculo metatarsali interno magno, scaphoideo' of his supposed syntypes, especially ZISP 2077.1, along with observations that are clearly at variance with other features exhibited by this material. In particular, both specimens lack 'digitis plantarum longis, fere per totam longitudinem palmatis, discis terminalibus digitorum minimis, vel indistinctis'. Do these discrepancies indicate that the specimens now labelled ZISP 2077 are not those which carried this number at the time when Nikolsky described the type material of *Chiromantis kachowskii*? After finding no evidence in either the St Petersburg archives or

collections that any such translocation of data might have occurred in the past and that the only examples of *Chiromantis* to be found in this museum are catalogued as having been collected in 1930, we conclude that we have indeed examined the syntypes of *C. kachowskii* and that Nikolsky's description of this species is less accurate than might have been expected.

4. Since the time of its first publication, no specimens other than the types have ever been assigned the name *Chiromantis kachowskii*. References in the literature merely acknowledge the existence of this nominal taxon, or repeat information derived from Nikolsky (1900) by authors who undoubtedly never personally examined the material in St Petersburg (see Werner, 1923, pp. 63–64; Noble, 1924, pp. 228, 320; Ahl, 1929, pp. 27–28 and 1931, p. 39). Loveridge (1957, p. 315) chose to treat *C. kachowskii* as a junior synonym of *C. petersii kelleri* Boettger, 1893, a rather casual and clearly unsatisfactory allocation that was nevertheless repeated by Gorham (1974, p. 156) and has remained unchallenged until the present time.

5. In marked contrast, *Tomopterna cryptotis* is currently believed to be a very common and widespread species, ranging from Angola, Namibia and South Africa northwards to Eritrea and from there westwards to Senegal. Formerly often confused with *Pyxicephalus delalandii* Tschudi, 1838, the name *cryptotis* was used to denote a distinct subspecies by Poynton (1964, p. 96), who observed differences in the calls of males from two allopatric populations in South Africa. The combination *Tomopterna cryptotis* was subsequently employed by Clarke (1981, pp. 313, 318), who considered this genus to be only distantly related to other African ranines, and by Frost (1985, p. 523). Still more recently, Dubois (1992, p. 336) and Duellman (1993, pp. 283–284) have treated *Tomopterna* Duméril & Bibron, 1841 as the single genus within the subfamily TOMOPTERNINAE Dubois, 1987. Some representative faunal studies that have adopted the name *Tomopterna cryptotis* include Lanza (1981, p. 168 and 1990, p. 411): Somalia; Poynton & Broadley (1985, pp. 125–126): Botswana, Zambia, Malawi, Mozambique and Zimbabwe; Passmore & Carruthers (1995, p. 294): South Africa; Rödel (1996, pp. 70–72): Senegal, Nigeria and Niger; and Largen (1997, p. 74): Eritrea.

6. There appears to be a strong prima facie case for the suppression of the specific name of *Chiromantis kachowskii* Nikolsky in order to maintain nomenclatural stability and avoid widespread confusion, but the need for caution is also evident. *Tomopterna krugerensis* Passmore & Carruthers, 1975 was described from a South African population morphologically very similar to *T. cryptotis* and only known to differ consistently in call structure. It would be wise to allow that acoustic and cytochemical studies might one day show that north-east African populations of *Tomopterna* are also discrete, particularly since separated by some 4000 km from the type locality of *T. cryptotis*. In this event, the name *T. kachowskii* (Nikolsky) would almost certainly be applicable. We therefore propose that the name *T. cryptotis* be given only conditional precedence over *Chiromantis kachowskii*, in accordance with Article 81.2.3 of the Code.

7. Commission approval of the proposal above will mean that, if the specific names of *T. cryptotis* and *C. kachowskii* are considered to be synonyms, *cryptotis* becomes the valid specific name for the taxon. The name *kachowskii* will remain available for use if taxonomically required for a species or subspecies distinct from *cryptotis*.

8. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to give the name *cryptotis* Boulenger, 1907, as published in the binomen *Rana cryptotis*, precedence over the name *kachowskii* Nikolsky, 1900, as published in the binomen *Chiromantis kachowskii*, whenever the two are considered to be synonyms;

(2) to place on the Official List of Specific Names in Zoology the following names:
   (a) *cryptotis* Boulenger, 1907, as published in the binomen *Rana cryptotis*, with the endorsement that it is to be given precedence over the name *kachowskii* Nikolsky, 1900, as published in the binomen *Chiromantis kachowskii*, whenever the two are considered to be synonyms;
   (b) *kachowskii* Nikolsky, 1900, as published in the binomen *Chiromantis kachowskii*, with the endorsement that it is not to be given priority over *cryptotis* Boulenger, 1907, as published in the binomen *Rana cryptotis*, whenever the two are considered to be synonyms.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3033

Myoxus japonicus Schinz, 1845 (currently *Glirulus japonicus*; Mammalia, Rodentia): proposed conservation as the correct original spelling of the specific name

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Abstract. The purpose of this application is to conserve the nominal species *Myoxus japonicus* Schinz, 1845 as the correct original spelling of the specific name of the Japanese Dormouse. Schinz proposed the name as *M. javanicus* but, since the species occurs only in Japan as was noted by Schinz, this has long been considered a mistake for *japonicus*, the spelling used by later authors. The Commission is asked to rule that *japonicus* is the correct original spelling. *Myoxus japonicus* is the type species by monotypy of *Glirulus* Thomas, 1906 (family GLIRIDAE) and it is proposed that the generic and specific names be placed on the Official Lists.

Keywords. Nomenclature; taxonomy; Mammalia; Rodentia; GLIRIDAE; *Glirulus*; *Glirulus japonicus*; Japanese Dormouse; Japan.

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1. Temminck (1844, p. 52, pl. 16, figs. 4–6) described and named as *Myoxus elegans* a new species of dormouse from Japan. However, the previous year Wagner (1843, p. 266) had transferred the name of the South African dormouse, *Graphiurus elegans* Ogilby, 1838 to the genus *Myoxus*. Schinz (1845, pp. 79–80) also placed *Graphiurus elegans* in *Myoxus*. In an addendum to the same work Schinz (pp. 530–531) pointed out that the name *M. elegans* Temminck was preoccupied by *M. elegans* (Ogilby) and (p. 530) proposed *Myoxus javanicus* (nomen novum) as a replacement name for *M. elegans* Temminck, referring to it as 'Der javanische Schläfer'. Despite these allusions to Java he gave a diagnosis in both Latin and German which ended with the words 'Habitat in Japonia' and 'Bewohnt Japan'. In the index (p. 559) the name *Myoxus javanicus* is repeated.

2. Thomas (1880, p. 40), initially unaware that Schinz had already replaced the preoccupied name *Myoxus elegans* Temminck, proposed *Myoxus lasiotis* as a replacement name. In an addition to this note, Thomas (p. 41) wrote: 'Since writing the above I have discovered that this species has been renamed *M. javanicus* by Schinz, in the appendix to his *Synopsis Mammalium*. As this name is incorrect and misleading, the species still requires a new name, in accordance with rule xi. of the Stricklandian code'. Later, Thomas (1906, p. 347) referred to Schinz's name *javanicus*

and wrote: 'We may, however, look upon it as a misprint for *japonicus*, and amend it accordingly, for the statement 'Habitat in Japonia' clearly shows that Schinz did not suppose it came from Java, and the accidental alteration of two letters only would make the difference'. Thomas pointed out that this course had already been taken by Wallace (1892, p. 395). Thomas also wrote: 'With regard to the generic position of this Dormouse, I think it cannot be assigned to any of the existing groups and must have a special name of its own'. He (p. 347) established the nominal genus *Glirulus* with *Myoxus japonicus* [sic] Schinz, 1845 as type species by monotypy. Since then, the name *japonicus*, attributed to Schinz (1845), has been universally used by zoologists (e.g. Aoki, 1913; Ellerman & Morrison-Scott, 1945; Holden, 1993). Although Wagner's South African species (para. 1 above) and *Glirulus japonicus* are no longer treated as congeneric it would be incorrect under Article 59.3 of the Code to reintroduce the specific name *elegans* Temminck.

3. The use of the spelling 'javanicus' twice and 'javanische' once in Schinz's original publication (see para. 1 above) and the absence of explicit evidence of an error prevent the name *javanicus* being interpreted as an incorrect original spelling of *japonicus* which would qualify for automatic correction under Article 32.5. However, as mentioned in para. 1 above, '*javanicus*' Schinz was a replacement name for *elegans* Temminck and under Article 72.7 the two names are objective synonyms. It would upset nomenclature and serve no useful purpose to return to the confusing name *javanicus*, unused as valid for over 100 years.

4. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to rule that the name *javanicus* Schinz, 1845, as published in the binomen *Myoxus javanicus*, is an incorrect original spelling of *japonicus*;

(2) to place on the Official List of Generic Names in Zoology the name *Glirulus* Thomas, 1906 (gender: masculine), type species by monotypy *Myoxus japonicus* Schinz, 1845;

(3) to place on the Official List of Specific Names in Zoology the name *japonicus* Schinz, 1845, as published in the binomen *Myoxus japonicus* and ruled under (1) above to be the correct original spelling of *javanicus* (specific name of the type species of *Glirulus* Thomas, 1906);

(4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:

(a) *javanicus* Schinz, 1845, as published in the binomen *Myoxus javanicus* and ruled under (1) above to be an incorrect original spelling;

(b) *elegans* Temminck, 1844, as published in the binomen *Myoxus elegans* (an invalid senior objective synonym of *Myoxus japonicus* Schinz, 1845).

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Comments on the proposed adoption of Berestneff, 1904 as the author of *Leucocytozoon* (Protista, Haemosporida) and of *Leukocytozoen danilewskyi* Ziemann, 1898 as the type species
(Case 3089; see BZN **56**: 168–170)

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I should like to comment briefly on this application from the perspective of an entomologist. With only one recorded exception, the species of leucocytozoon blood-parasites with known vectors are transmitted among their bird hosts solely by bloodsucking Diptera of the family SIMULIIDAE (blackflies). A few years ago, while researching the systematic and biological literature on *Leucocytozoon* for a chapter in my book on the natural history of blackflies, I came upon the generic authorship anomaly that is now brought forward for resolution by the Commission. The matter was unimportant for my purposes but did have me perplexed as to why the parasitologists should be in such seeming disarray. Dr Valkiūnas makes a good case now for his solution to the problem and I support it.

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I would like to add my strong support for the application by Dr Valkiūnas to conserve the genus *Leucocytozoon* Berestneff, 1904 with *L. danilewskyi* (Ziemann, 1898) as the type species. The literature is already confused with inconsistent use of the names *L. danilewskyi* and its junior synonym *L. ziemanni* (Laveran, 1902).

Garnham (1966) in his outstanding monograph *Malaria parasites and other Haemosporidia* lucidly discussed the genus *Leucocytozoon*; he concluded that attribution to Berestneff (1904) was correct and recognised *L. danilewskyi* (Ziemann) as the type species.

The approval of this application is essential for maintaining a stable nomenclature, which is particularly critical for research and practice in avian blood parasites.

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1. In his application to the Commission Dr Valkiūnas has sought to rationalise the situation relating to the designation of authorship of the haematozoan genus *Leucocytozoon* and the establishment of the type species. As he rightly states, this problem has given rise to much debate over the years and preferences have swung from one view to the other frequently during this time. Valkiūnas has not provided any new argument, but has simply reiterated previous discussion and views with a conclusion that the situation should be resolved once and for all. His references to published discussion on the topic do not go beyond the early

1970s and he has not taken account of a more recent paper on the subject, namely that of Bennett, Earle & Peirce (1993). This paper, published by the International Reference Centre for Avian Haematozoa, deals with the taxonomic review of leucocytozoids of the Falconiformes and Strigiformes. With specific reference to the latter group the question as to the validity of *L. danilewskyi* as the type species was considered from a fresh perspective. It was concluded that, because Ziemann did not describe the leucocytozoid, he had not made the name *Leukocytozoen danilewskyi* available and that the continued use of that specific name was invalid.

2. The first author to properly describe a leucocytozoid (*Leucocytozoon ziemanni*) from the Little Owl *Athene noctua*, with both illustrations and measurements, was Laveran (1902). In this paper Laveran described parasites from the Great Tit *Parus major* as well as from *Athene noctua*, all under the generic name *Haemamoeba*. Wenyon (1926) adopted the generic name *Leucocytozoon*.

3. Because the description of *L. majoris* appeared before that of *L. ziemanni* in Laveran's paper, this was considered to be the type species for many years. However, because gametocytes of a leucocytozoid from *Athene noctua* had been illustrated by Ziemann (1898) it was concluded that *L. ziemanni* should take priority over *L. majoris*. A neohapantotype slide was designated (IRCAH:92604) by Bennett, Earle & Peirce (1993) and the reference to authorship recorded as '*Leucocytozoon ziemanni* (Laveran, 1902) Wenyon, 1926'. In fact the first author to use the name *Leucocytozoon ziemanni* was Lühe (1906) as pointed out by Bennett et al. (1975) and included in his generic review of *Leucocytozoon* by Sambon (1908). Therefore, the correct name of the type species should be *Leucocytozoon ziemanni* (Laveran, 1902), Lühe (1906).

4. It has to be remembered that at the end of the 19th century and in the early 20th century protozoology was in its infancy, and scientists were not clear as to what parasites they were observing and their relationships to other haematozoa in particular. Many of the earliest references fail to meet the criteria for availability and this is particularly true of Ziemann (1898) who really had no idea what he was observing. His use of the name *Leukocytozoen danilewskyi*, irrespective of the spelling of the generic name, was accompanied by a '?'. As pointed out by Bennett et al. (1975), various later authors have misconstrued Ziemann's latin usage of the genitive case (i.e. 'the leucocytozoen of Danilewsky') as a specific name. Although well illustrated, there was no proper description.

5. The question as to the authority of the generic name *Leucocytozoon* is a separate issue. It needs to be considered whether the worker who first used the name with the generally accepted spelling should be considered the author, or whether this should fall to the worker who first provided the taxonomic criteria on which the genus could be identified. Therefore, while Berestneff (1904) was the first to use the spelling *Leucocytozoon*, it was Sambon (1908) who first clearly defined the characteristics of the genus and it is for this reason that he has been attributed with authorship of the genus, i.e. *Leucocytozoon* Sambon, 1908.

6. With specific reference to the points on which Valkiūnas has asked the Commission to rule in para. 7 of his submission, I fully endorse the proposal to suppress the generic name *Leukocytozoen* Ziemann, 1898. This spelling is rarely used by taxonomists and it is desirable to rationalise the situation.

7. As to the other issues raised, I believe that, for the reasons given in my para. 5 above, authorship of *Leucocytozoon* should be attributed to Sambon (1908). Ziemann (1898) did not describe *L. danilewskyi* as an identifiable and acceptable species and that specific name cannot be adopted from Berestneff (1904) since that author was preempted by Laveran (1902) who described *ziemanni* from the same host species. I therefore consider that *Leucocytozoon ziemanni* (Laveran, 1902) should be ruled as the type species of *Leucocytozoon* Sambon, 1908.

8. Over the last 25 years most authors to my knowledge have used *L. ziemanni* as the type species of *Leucocytozoon*, Valkiūnas being one of the exceptions. As supporting evidence, I list papers by: Khan, 1975; Kocan & Kocan, 1978; Peirce, 1989; Bennett, Earle, du Toit & Huchzermeyer, 1992; Bennett, Earle & Peirce, 1993; Bennett, Peirce & Earle, 1994.

9. This evidence clearly supports the view that *L. ziemanni* has been widely and consistently accepted as the type species over the last 25 years. If, nevertheless, *L. danilewskyi* is considered to be an available name, I propose that it should be suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy by the Commission under its plenary power in order to maintain the present usage of *L. ziemanni* as type species and Sambon (1908) as author of the nominal genus *Leucocytozoon*.

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I am in full support of the application to adopt Berestneff, 1904 as the author, and of *Leukocytozoen danilewskyi* Ziemann, 1898 as the type species, of the genus *Leucocytozoon*.

Unfortunately, G.F. Bennett was inconsistent in his attempt to clarify the status of the specific name *L. danilewskyi*. In 1975, Bennett (Bennett et al., 1975) declared *L. danilewskyi* to be a nomen nudum; this was an invalid action because the original paper, in which the name was established, was accompanied by excellent illustrations. In 1982, Bennett changed his mind and accepted *L. danilewskyi* as a valid name (Bennett et al., 1982, p. 217). In 1992, he (see Bishop and Bennett, 1992, p. 187)

declared *L. danilewskyi* to be an invalid synonym of *L. ziemanni* (Laveran, 1902) in spite of the fact that the former name had priority. In 1994, Bennett excluded *L. danilewskyi* from the list of available names and used *L. ziemanni* as a valid name (Bennett et al., 1994, p. 70). This inconsistency contributed to instability in specific names of leucocytozoids.

It is important to note that the name *L. danilewskyi* has been frequently used in the literature in the last three decades (see for example, Burtikashvili, 1978; Peirce, 1981; Kairullaev & Yakunin, 1982; Kairullaev, 1985; Kirkpatrick & Lauer, 1985; Valkiūnas, 1988; Krylov, 1994, 1996; Valkiūnas, 1997), and there is no doubt what taxon it denotes. Berestneff (1904) as the author of the genus *Leucocytozoon* has been accepted in several important and well-illustrated books on the subject (Garnham, 1966; Krylov, 1996; Valkiūnas, 1997).

The ruling of the Commission on the subject will provide stability in zoological nomenclature which is under threat particularly since the publication by Bennett et al. (1975).

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Comments on the proposed conservation of the specific name of *Bulinus wrighti* Mandahl-Barth, 1965 (Mollusca, Gastropoda)

(Case 3126; see BZN **56**: 113–116)

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The fact that *Bulinus wrightii* Sowerby, 1853 is an achatinid and *Bulinus reticulatus wrighti* Mandahl-Barth, 1954 is a planorbid in my view makes it very unlikely that the two species were originally described in the same nominal genus, notwithstanding the same generic name was used for them. Even a non-malacologist like me would never consider the two to be congeneric. It seems more likely, as has been suggested already, that Sowerby made a typographical or clerical error in writing '*Bulinus*'

instead of *Bulinus*. However, he could have followed Broderip (1828, *Zoological Journal*, part 4, p. 222) in substituting *Bulinus* for *Bulimus* Scopoli, 1777. In the latter case *Bulinus* sensu Sowerby (1853), i.e. *Bulinus* Broderip, 1828, is a different genus from *Bulinus* sensu Mandahl-Barth (1954), i.e. *Bulinus* O.F. Müller, 1781; Article 57.8.1 of the Code applies and the homonymy of the species names is to be disregarded.

As this contention is difficult or impossible to prove, it might be best for the Commission to rule that Sowerby (1853) made a clerical error, writing *Bulinus* for *Bulimus*, and that there exists no primary homonymy between Sowerby and Mandahl-Barth's species names.

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In his comment (above), Prof Holthuis has suggested that Sowerby (1853) misspelled *Bulimus* and wrote '*Bulinus*' and that, under Article 57.8.1 of the Code, the homonymy between *Bulinus wrightii* Sowerby and *Bulinus wrighti* Mandahl-Barth is to be disregarded.

This course would be acceptable if the two taxa named *wrightii* could be shown to have been placed in combination 'with homonymous generic names having the same spelling but established for different nominal genera'. This depends on whether the ACHATINIDAE and the PLANORBIDAE are considered to be sufficiently different; though distinct they are both gastropod molluscs and clearly not so different as the Insecta and Aves in the example given in the Code.

In submitting our application it seemed to us that, even if the homonymy could be disregarded, a worker was still likely to propose an unfortunate replacement name for *Bulinus wrighti* Mandahl-Barth, 1965 if the issue was not settled, and the name conserved, by Commission action.

Comments on the proposed conservation of *Polydora websteri* Hartman in Loosanoff & Engle, 1943 (Annelida, Polychaeta) by a ruling that it is not to be treated as a replacement name for *P. caeca* Webster, 1879, and designation of a lectotype for *P. websteri*

(Case 3080; see BZN **55**: 212–216)

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Hartman (1943) proposed the replacement name *Polydora websteri* for the invalid *P. caeca* of Webster (1879) (para. 4 of the application). I support the proposal to conserve *P. websteri* in accordance with Hartman's concept, and to designate a lectotype.

Since the application by Radashevsky & Williams was published (BZN **55**: 212–216, December 1998), Radashevsky (1999) has redescribed Hartman's original (1943) specimens, including the proposed lectotype. It is clear from Hartman's

description and the re-examination of her specimens that Hartman's replacement name for *Polydora caeca* Webster was based on a misidentification. I fully support the conclusion that *Polydora websteri* Hartman is a different species from *P. caeca* Webster.

The application was prompted by the recent discovery of *Polydora* specimens supposedly matching Webster's (1879) description of *P. caeca* and now described as *P. neocaeca* by Williams & Radashevsky (1999) (paras. 6 and 10 of the application). The new specimens were collected from Rhode Island.

In their application, Radashevsky & Williams have requested the Commission to conserve the name *P. websteri* for Hartman's species because the name has been widely used in aquaculture and generally in studies of shell borers. I support this proposal for a further reason. Past aquaculture and taxonomic records of *Polydora websteri* in the U.S.A. and elsewhere undoubtedly refer to more than one species, including the newly-recognised *P. neocaeca* with which *P. websteri* reportedly coexists in mollusc shells (see Williams & Radashevsky, 1999). Possibly some reports ostensibly solely of *P. websteri* also included *P. neocaeca*. It would assist further elucidation of the taxonomy and biology of this group of morphologically-similar species if *P. websteri* is stabilised by a lectotype.

The type material of *Polydora caeca* Webster, collected from Northampton Co., Virginia, cannot be found (para. 7 of the application). Williams & Radashevsky (1999) consider that their new species, *P. neocaeca*, collected from Rhode Island, is not only much closer to *P. caeca* than the taxon collected from Connecticut and described by Hartman as *P. websteri*, but 'was found to match Webster's description ...'. In my view this is not correct as there are differences in palp and body pigmentation, in branchial distribution, presence of eyes, in morphology of the first segment, the segment five setae, and the pygidium, that are discernible from Webster's text and setal drawings and not addressed in the application or in the two subsequent descriptive papers by Radashevsky (1999) and Williams & Radashevsky (1999). Such differences are not minor, and I suggest that the interesting coincidence of palp banding does not allow us to ignore them.

The widely-distributed *Polydora brevipalpa* Zachs, 1933, also with palp-banding, shows similarities to Webster's description. In addition there are several *Polydora*-group species known to be so similar that they cannot be reliably separated morphologically (see, for example, Rice 1991; Manchenko & Radashevsky, 1998). Such examples lead to the conclusion that *P. caeca* Webster and *P. neocaeca* are different taxonomic species when there are unresolved differences in their descriptions. While there are no other similar species with banding previously recorded from near the *P. caeca* Virginia type locality it is possible that one exists which has been as yet overlooked. As other *Polydora*-group species have frequently been reported as invasive aliens, it is possible *P. neocaeca* is an introduction from elsewhere, arriving on the U.S.A. eastern coast subsequent to Webster (1879).

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I strongly urge that the proposed conservation of the specific name of the polychaetous annelid *Polydora websteri* Hartman in Loosanoff & Engle, 1943 (SPIONIDAE) and designation of a lectotype for this species be supported.

The application by Radashevsky & Williams (BZN **55**: 212–216) is clearly presented and well argued. It requests conservation of the specific name *websteri* for the species seen and described by Hartman (1943), and not for the distinct species (*P. caeca* Webster, 1879) for which Hartman intended it to be a new replacement name (nomen novum) because of homonymy with the older *Leucodorum coecum* Örsted, 1843 (currently *Dipolydora coeca*).

As pointed out by Radashevsky & Williams, the species described by Hartman is well known and widely distributed, whereas the species seen and described by Webster (1879) has until recently not been recognized. The authors mention (paras. 6 and 10) only two known finds of the species since it was described: material of S.H. Hopkins from off Virginia (the type locality of *P. caeca*), and more recently live material from Rhode Island.

Hartman's original material of *Polydora websteri* is extant, and a proposed lectotype, in agreement with Hartman's description and also with that of others who have used the name, has been selected and redescribed by Radashevsky (1999).

Williams & Radashevsky (1999) have also provided a careful and detailed description of a new nominal species, *P. neocaeca* Williams & Radashevsky, 1999 based on material from Rhode Island, and very clearly indicated that their material fits the description of *P. caeca* from Virginia by Webster. This acknowledges that two taxonomic species are involved and promotes stability in maintaining the present usage and type locality of P. *websteri*.

The proposals made by Radashevsky and Williams in their application are well considered and I suggest that supporting their application will promote the greatest nomenclatural stability.

Comment on the proposed designation of *Cuma rathkii* Krøyer, 1841 as the type species of *Diastylis* Say, 1818 (Crustacea, Cumacea)

(Case 3078; see BZN **56**: 174–176)

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Dr Gerken's application is most welcome and actually long overdue. The unfortunate fact that *Diastylis* has a type species of doubtful identity has been known

for a long time. It was mentioned by Zimmer (1940, pp. 1 2) and Day (1980, pp. 221, 264), while Băcescu (1992, pp. 274, 277) extensively discussed the matter and explained two possible solutions: (1) the fixation of a neotype for *Diastylis arenarius*, the type species of the genus, or (2) the fixation of a different type species. Day and Băcescu agreed that if the second course were followed the most suitable type species would be *Cuma rathkii* Krøyer, 1841, and we must be grateful to Dr Gerken for proposing that the Commission should designate this species. I wholeheartedly agree with her action, though I have a few remarks on minor points of detail.

In para. 1 Dr Gerken says that *Diastylis arenarius* was the only species included in the genus and is therefore the type species by monotypy. However, after describing *D. arenarius* Say (1818, p. 315) noted 'I think there is little doubt of this animal being congeneric with *Cancer scorpioides*, described by Montagu' and on p. 316 he continued '*Cancer esca* Gmel. ... will ... form a third species of this genus'. As mentioned in para. 3 of the application, Montagu's species is now placed in *Bodotria* and *Gammarus esca* Fabricius, 1779 is unidentifiable. The first fixation of a type species known to me was by Fowler (1912, p. 534) who cited *D. arenarius* in the belief that the genus was originally monotypic.

The 'type locality' mentioned in Dr Gerken's para. 5 actually consists of two widely separated localities: Hornbaek (Denmark) in the Kattegat and southern Greenland. As the type material in Copenhagen consists of several specimens from these two localities it would be advisable to select a lectotype for *Cuma rathkii* in case the existing syntypes are found to represent more than one taxon.

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Fowler, H.W. 1912. The Crustacea of New Jersey. *Report of the State Museum of New Jersey*, **1911**: 29–650, pls. 1–150.

Comment on the proposed precedence of NYMPHULINAE Duponchel, [1845] over ACENTROPINAE Stephens, 1835 (Insecta, Lepidoptera)

(Case 3048; see BZN **56**: 31–33)

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In the past the crambid species concerned in this case were generally referred to as the NYMPHULINAE. The single species *Acentria ephemerella* [Denis & Schiffermüller], 1775 was placed in a separate subfamily on its own; *Acentria ephemerella* is a senior subjective synonym of both *Phryganea nivea* Olivier, 1791, the type species of *Acentria* Stephens, 1829, and of *Acentropus garnonsii* Curtis, 1834, the type species by original designation of *Acentropus* Curtis, 1834. The latter nominal genus is the basis of the subfamily ACENTROPINAE Stephens, 1835; under the provisions of the Code (Article 40.1 of the 1999 Edition) ACENTROPINAE is a potentially valid name even though *Acentropus* is invalid because it is a junior synonym of *Acentria*.

Acentria ephemerella was placed by one of us (Speidel, 1981) in the same subfamily as the species which were classified in the NYMPHULINAE; this resulted in the synonymisation of ACENTROPINAE Stephens, 1835 and NYMPHULINAE Duponchel,

[1845] and it was necessary to decide which of these names should be used. Speidel (1981) chose ACENTROPINAE on simple priority, though the name NYMPHULINAE is of course well established and widely known for the aquatic crambid moths. NYMPHULINAE has been used often in the past 20 years (probably in more than the 72 papers mentioned in para. 3 of the application), but the synonymy of ACENTROPINAE and NYMPHULINAE has rarely been mentioned and, contrary to para. 3 of the application, the deliberate giving of precedence to the latter name has not been evident. The ACENTROPINAE s.l. are a subfamily of the microlepidopterous family CRAMBIDAE with only a very few specialists working on it, and it is not surprising that most references citing ACENTROPINAE as senior synonym of NYMPHULINAE are by Speidel and his colleagues.

As mentioned above, the subfamily ACENTROPINAE was often cited as valid before 1981, with *Acentria ephemerella* as the only included species. This species has a very restricted distribution; it is found in Europe with only a few records from North America. It is therefore not surprising that most non-European authors are not familiar with the ACENTROPINAE s.str. and indeed hardly have reason to mention it. According to para. 4 of the application, ACENTROPINAE has been used in the wider sense only by Gomez Bustillo (1983) and by Speidel and his co-author Roesler (Roesler & Speidel, 1981). This is not correct: there have been other papers (Bassi, Passerin D'Entrèves, Speidel & Zangheri, 1995; Mey, Nuss & Speidel, 1998), and it makes no difference that Speidel was a co-author (e.g., the systematic section on ACENTROPINAE in Bassi et al. (1995) was written by Bassi alone). There have also been papers (Hasenfuss, 1991; Yamanaka, 1998) accepting the senior synonym ACENTROPINAE where Speidel was not involved. For the record, we mention two recent papers by Speidel (1998a; 1998b).

It is not quite true (cf. para. 3 of the application) that the synonymy of ACENTROPINAE and NYMPHULINAE has been 'generally accepted' since 1981. Two important authors (Munroe, 1983; Yoshiyasu, 1985) did not do so, and we can find no indication that Inoue (1982) or Munroe (1995) did, since the name ACENTROPINAE is not mentioned at all in those papers. Palm (1996) described the synonymy as 'omstridt' [arguable]. Of the papers cited in the application, only Minet (1982) and Shaffer, Nielsen & Horak (1996) accepted the synonymy and explicitly favoured giving precedence to NYMPHULINAE.

It is not possible to give an exact number of genera which share the larval and pupal autapomorphies of the ACENTROPINAE (s.l.). It is uncertain whether several tropical genera belong to the subfamily because the immature stages are unknown. The present (unpublished) list includes about 45 genera worldwide, about 20 generic names presently regarded as junior synonyms and 5 generic homonyms. The number of 93 genera according to Fletcher & Nye (1984) cited in the application is probably due to the fact that the MUSOTIMINAE were included and/or that the generic synonyms were separately counted.

Progress in phylogenetic research is always accompanied by changes in taxonomy and nomenclature. Acceptance of the proposals by Solis in Case 3048 would provide an argument for any future proposal to abandon the principle of priority of synonymous supraspecific names. The discussion of characters supporting or falsifying synonymisations must not be unnecessarily complicated by a discussion about the names. We would support the suppression of ACENTROPINAE if this were an

old and forgotten name which had been dug out, but this is not the case and we therefore oppose the application.

Acknowledgement

We thank our colleague Jason Dunlop (Berlin) for linguistic corrections of the English text.

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Comment on the conservation of usage of the specific names of *Scaptodrosophila rufifrons* (Loew, 1873) and *S. lebanonensis* (Wheeler, 1949) by the designation of a neotype for *S. rufifrons* (Insecta, Diptera)

(Case 3128; see BZN **56**: 179–181)

V. Sidorenko

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The history and taxonomy of the species concerned and the purpose of Dr Bächli's proposal have been discussed not only in the published application but also in the recent revision of the *S. rufifrons* species-group by Papp, Rácz & Bächli (1999), which includes a description and figures of the neotype. In my opinion this application is completely satisfactory and I support it.

Comment on the proposed conservation of the specific name of *Solenopsis invicta* Buren, 1972 (Insecta, Hymenoptera)

(Case 3069; see BZN **56**: 27–30, 198–199)

Sanford D. Porter

Center for Medical, Agricultural and Veterinary Entomology, USDA-ARS, P.O. Box 14565, Gainesville, Florida 32604, U.S.A.

Dr Shattuck, Dr Wojcik and I appreciate the strong support of Drs Walter R. Tschinkel, S.B. Vinson and E.O. Wilson for the proposed conservation of *Solenopsis invicta* Buren. Their comments together with the signatures of 76 colleagues (see BZN **56**: 28) reflect the overwhelming support of the fire ant research community for this action. I need to clarify the concern of Stephen W. Taber that we are adopting 'mere convenience as a standard in scientific endeavor'. Quite the contrary — our proposal is to establish an exception and not a standard. Furthermore, our proposal was motivated by the principle of nomenclatural stability, not 'mere convenience'.

Comments on the proposed designation of neotypes for the nominal species *Vespertilio pipistrellus* Schreber, 1774 and *V. pygmaeus* Leach, 1825 (currently *Pipistrellus pipistrellus* and *P. pygmaeus*; Mammalia, Chiroptera)
(Case 3073; see BZN **56**: 182–186)

(1) D.W. Yalden

School of Biological Sciences, 3.239 Stopford Building, University of Manchester, Manchester M13 9PT, U.K.

I wish to register my support for this case and express my hope that the Commission will reach an early conclusion. It seems to me only sensible to conserve the name *P. pipistrellus* for a bat which is very abundant across much of western Europe, including Britain. The use of *P. pygmaeus* (Leach, 1825) for the cryptic species previously confounded with *P. pipistrellus* is perhaps more contentious, but it conserves an early name and prevents prolonged searching among later names whose attribution to the new species will be no more certain; its prompt adoption will prevent an unseemly scramble for alternative names. This potential problem has been developing, from taxonomic suspicion to certainty, over 6 or 7 years. It has become the practice to refer to these species by informal names, in the absence of formal nomenclature for them (formal nomenclature having been delayed by lengthy consideration of the best course of action). With the forthcoming *Handbook of British Mammals* (4th edition) currently under active preparation, it is time this nomenclature was formalized. The present proposals seem an eminently sensible way of doing so, and I support and urge their rapid approval by the Commission.

(2) John D. Altringham

School of Biology, Louis Compton Building, University of Leeds, Leeds LS2 9JT, U.K.

I am writing in support of the case for the proposed designation of neotypes of *P. pipistrellus* and *P. pygmaeus*. I believe the evidence in support of the taxonomic conclusions is now overwhelming. I encourage an early resolution of the issue, since both species are the subject of current research and of a Biodiversity Action Plan.

(3) Tony Lane

East Yorkshire Bat Group, 7 Orchard Road, Skidby, Cottingham, East Yorkshire, HU16 5TL, U.K.

To name the new species of 55kHz pipistrelle as *Pipistrellus pygmaeus*, a name given by Leach (1825) to a small (immature, pygmy?) pipistrelle specimen would seem to be highly misleading unless a tissue sample of the original specimen matches the genetic pattern of recent authentic specimens. More acceptable names would reflect the joint discoverers or a distinguishing feature of the species (such as the 'soprano' call). So far as I am aware, Yorkshire specimens of the 55kHz pipistrelle are very closely matched in size (forearm measurement) to the common pipistrelle, so it is incorrect to regard the new species as significantly smaller or as a pygmy pipistrelle.

(4) P.A. Racey

Department of Zoology, University of Aberdeen, Tillydrone Avenue, Aberdeen AB24 2TZ, Scotland, U.K.

I write to support most strongly the proposal by Jones & Barratt to adopt the names *P. pipistrellus* and *P. pygmaeus* for the 45kHz and 55kHz pipistrelles respectively. I was involved in the work that established an 11% divergence in a 630bp region of the cytochrome *b* gene; this divergence, together with the fact that the populations mate assortatively, is convincing evidence that these are two distinct species.

It is more than six years since Jones & van Parijs (1993) described clear differences betweeen the phonic types of pipistrelles, and since then the scientific community has awaited clarification of their nomenclature. It is therefore urgent that this matter is resolved, particularly as a new edition of *The Handbook of British Mammals* will shortly go to press and this will be expected to provide the necessary clarification and stability. I hope the Commission will support the proposals at the earliest opportunity.

(5) Wieslaw Bogdianowicz

Museum & Institute of Zoology, Polish Academy of Sciences, Wilcza 64, Box 1007, 00–679 Warszawa, Poland

The proposal for providing neotypes for the two broadly sympatric cryptic species of pipistrelle should be approved as rapidly as possible. Although an original specimen of *P. pygmaeus* (Leach, 1825) exists it cannot be allocated to either species with complete certainty, and the most suitable way forward is to designate a neotype. If a later specific name (such as *mediterraneus* Cabrera, 1904; see para. 6 of the application) were to be adopted a whole list of synonyms would be available to replace it and this would not give stability.

(6) John R. Speakman

Department of Zoology, University of Aberdeen, Tillydrone Avenue, Aberdeen AB24 3TZ, Scotland, U.K.

I am in full agreement with the application, and would emphasize the importance of moving to a speedy resolution of the issue. At present there is considerable research activity on these clearly separate species, and descriptions of this work are hampered by the lack of certainty over the correct names. Workers have resorted to describing the species as 'phonotypes' of *P. pipistrellus*, and this an inadequate and potentially confusing state of affairs.

Comment on the proposed conservation of LORISIDAE Gray, 1821 and GALAGIDAE Gray, 1825 (Mammalia, Primates) as the correct original spellings
(Case 3004; see BZN **55**: 165–168; **56**: 73)

Colin Groves

Department of Archeology and Anthropology, Australian National University, Canberra, A.C.T. 0200, Australia

Paulina Jenkins

Mammal Group, Department of Zoology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

Regretfully, we have to stand against this proposal.

Since one of us (Jenkins, 1987) pointed out that the correct original spellings of the names previously written 'LORISIDAE' and 'GALAGIDAE' are actually LORIDAE and GALAGONIDAE, at least four influential works (Corbet & Hill, 1992; Groves, 1993; Rowe, 1996; McKenna & Bell, 1997) have adopted the new spellings. It is not as if these were family-group names based on different nominal genera: they are just different ways of forming family-group names from the same nominal genera. There is no likelihood of confusion. Unless there is a good reason the rules of nomenclature should be followed.

We also point out that Jenkins (1987) noted that there are three other necessary changes consequent on the adoption of correct original spellings: INDRIDAE (for 'INDRIIDAE'), STREPSIRRHINI (for 'STREPSIRHINI') and HAPLORRHINI (for 'HAPLORHINI'). There are no proposals to conserve the previously familiar spellings of the names in these cases, yet there does not seem to be any difference between the two sets of names that would justify an application to the Commission in the one case but not in the other.

The Commission is requested to reject the proposal.

Additional references

Groves, C.P. 1993. Order Primates. *In* Wilson, D.E. & Reeder, D.M. (Eds.), *Mammal species of the world. A taxonomic and geographic reference*, Ed. 2. Smithsonian Institution Press, Washington.

McKenna, M.C. & Bell, S.K. 1997. *Classification of mammals above the species level.* Columbia University Press, New York.

Rowe, N. 1996. *The pictorial guide to the living primates.* Pogonias Press, East Hampton, New York.

OPINION 1942

Haminoea [Turton] in Turton & Kingston in Carrington, 1830 and HAMINOEINAE Pilsbry, 1895 (Mollusca, Gastropoda): placed on Official Lists as correct original spellings

Keywords. Nomenclature; taxonomy; Gastropoda; HAMINOEINAE; *Haminoea*; *Haminaea*; *Haminea*.

Ruling

(1) The name *Haminoea* [Turton] in Turton & Kingston in Carrington, 1830 (gender: feminine), type species by monotypy *Bulla hydatis* Linnaeus, 1758, is hereby placed on the Official List of Generic Names in Zoology.

(2) The name *hydatis* Linnaeus, 1758, as published in the binomen *Bulla hydatis* (specific name of the type species of *Haminoea* [Turton] in Turton & Kingston in Carrington, 1830), is hereby placed on the Official List of Specific Names in Zoology.

(3) The name HAMINOEINAE Pilsbry, 1895 (type genus *Haminoea* [Turton], 1830) is hereby placed on the Official List of Family-Group Names in Zoology (correction of HAMINEINAE under Article 35.4 of the Code).

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:
   (a) *Haminaea* Leach, 1847 (an incorrect subsequent spelling of *Haminoea* [Turton], 1830);
   (b) *Haminea* Gray, 1847 (an incorrect subsequent spelling of *Haminoea* [Turton], 1830).

(5) The name HAMINEINAE Pilsbry, 1895 is hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology (an incorrect original spelling of HAMINOEINAE).

History of Case 2588

An application to confirm *Haminoea* as the correct original spelling of the name for a marine gastropod genus was received from Dr Riccardo Giannuzzi-Savelli (*Palermo, Italy*) on 1 December 1986. After correspondence the case was published in BZN **44**: 166–167 (September 1987). Notice of the case was sent to appropriate journals.

The subsequent history of the case, leading to the publication (BZN **47**: 263–269; December 1990) of a further application to conserve the spelling *Haminaea* Leach, 1820, was set out in BZN **56**: 49–50 (March 1999).

A number of authors commented on the case (BZN **56**: 50–56), and all supported the original proposal that the spelling *Haminoea* [Turton], 1830 should be accepted as correct. Comments were received from Dr Riccardo Gianuzzi-Savelli (*Palermo, Italy*), Mr Robert Burn (*Geelong, Victoria, Australia*), Dr Richard C. Willan (*Museum & Art Gallery of the Northern Territory, Darwin, Australia*), Dr W.B. Rudman (*Australian Museum, Sydney, Australia*), Dr C.W. Bryce (*Museum of Natural Science, Perth, Australia*), Dr Hamish G. Spencer (*University of Otago,*

Dunedin, New Zealand), Dr Philippe Bouchet (*Muséum National d'Histoire Naturelle, Paris, France*), Dr Michael Schroedl (*Zoologisches Institut, Ludwig-Maxilians-Universität, München, Germany*), Dr Julie Marshall (*La Trobe University, Bundoora, Victoria, Australia*), Dr T.M. Gosliner (*California Academy of Sciences, San Francisco, California, U.S.A.*), Dr Paula M. Mikkelsen (*American Museum of Natural History, New York, N.Y., U.S.A.*) and Dr Heike Waegele (*Spezielle Zoologie, Ruhr-Universität, Bochum, Germany*).

Proposals for voting on this case, which followed those of the original application (BZN **44**: 166) and which did not require the use of the plenary power, were set out in BZN **56**: 56 (March 1999).

Decision of the Commission

On 1 September 1999 the members of the Commission were invited to vote on the proposals set out in BZN **56**: 56. At the close of the voting period on 1 December 1999 the votes were as follows:

Affirmative votes 21: Bock, Bouchet, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Mawatari, Minelli, Nielsen, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — none.

No vote was received from Martins de Souza.

Lehtinen and Ride were on leave of absence.

Original references

The following are the original references to the names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:

Haminaea Leach, 1847, *in* Gray, J.E. (Ed.), *Annals and Magazine of Natural History*, **20**(133): 268.

Haminea Gray, 1847, *Proceedings of the Zoological Society of London*, **15**: 161.

HAMINEINAE Pilsbry, 1895, *Tryon's manual of conchology; structural and systematic*, vol. 15, p. 351 (an incorrect original spelling of HAMINOEINAE).

Haminoea [Turton] in Turton & Kingston in Carrington, 1830, Conchology, arranged on the amended system *in*: *The Teignmouth, Dawlish and Torquay guide*, part 2 (The natural history of the district; or, lists of the different species of animals, vegetables and minerals, and their respective localities, scientifically arranged), genus no. 63.

HAMINOEINAE Pilsbry, 1895, *Tryon's manual of conchology; structural and systematic*, vol. 15, p. 351 (incorrectly spelled as HAMINEINAE).

hydatis, *Bulla*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 726.

OPINION 1943

Pachylops Fieber, 1858 (Insecta, Heteroptera): *Capsus chloropterus* Kirschbaum, 1856 (currently *Orthotylus virescens* (Douglas & Scott, 1865)) fixed as the type species

Keywords. Nomenclature; taxonomy; Heteroptera; MIRIDAE; *Pachylops*; *Orthotylus virescens*.

Ruling

(1) Under the plenary power the designation in Opinion 253 (1954) of *Litosoma bicolor* Douglas & Scott, 1868 as the type species of *Pachylops* Fieber, 1858 is hereby set aside.

(2) The entry for *Pachylops* Fieber, 1858 in the Official List of Generic Names in Zoology is hereby emended to record that the type species by monotypy is *Capsus chloropterus* Kirschbaum, 1856 (invalid senior subjective synonym of *Litosoma virescens* Douglas & Scott, 1865).

(3) The entry for *bicolor*, *Litosoma*, Douglas & Scott, 1868, in the Official List of Specific Names in Zoology is hereby emended to delete reference to it as the specific name of the type species of *Pachylops* Fieber, 1858.

(4) The name *virescens* Douglas & Scott, 1865, as published in the binomen *Litosoma virescens* (valid subjective synonym of the specific name of *Capsus chloropterus* Kirschbaum, 1856, the type species of *Pachylops* Fieber, 1858), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3050

An application to conserve the subgeneric name *Pachylops* Fieber, 1858 by setting aside Opinion 253 (June 1954) and accepting the original fixation of *Capsus chloropterus* Kirschbaum, 1856 (an invalid senior subjective synonym of *Orthotylus virescens* (Douglas & Scott, 1865)) as the type species was received from Dr A. Carapezza (*Palermo, Italy*) and Dr I.M. Kerzhner (*Zoological Institute, Russian Academy of Sciences, St Petersburg, Russia*) on 13 June 1997. After correspondence the case was published in BZN **55**: 146–150 (September 1998). Notice of the case was sent to appropriate journals.

The name *Pachylops* Fieber, 1858 was placed on the Official List in Opinion 253 with *Litosoma bicolor* Douglas & Scott, 1868 incorrectly identified as a senior subjective synonym of the invalid *Capsus chloropterus* Kirschbaum, 1856 and designated as the type species.

It was noted on the voting paper that the application to set aside Opinion 253 had received the support of a number of specialists (para. 12 on BZN **55**: 148).

Decision of the Commission

On 1 September 1999 the members of the Commission were invited to vote on the proposals published in BZN **55**: 149. At the close of the voting period on 1 December 1999 the votes were as follows:

Affirmative votes — 21: Bock, Bouchet, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Mawatari, Minelli, Nielsen, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — none.
No vote was received from Martins de Souza.
Lehtinen and Ride were on leave of absence.

Original references

The following are the original references to the name placed on an Official List, and to the emendations to the entries on Official Lists, by the ruling given in the present Opinion:

bicolor, *Litosoma*, Douglas & Scott, 1868, *Entomologist's Monthly Magazine*, **4**: 267.
Pachylops Fieber, 1858, *Wiener Entomologische Monatschrift*, **2**: 314.
virescens, *Litosoma*, Douglas & Scott, 1865, *The British Hemiptera-Heteroptera*, p. 339.

OPINION 1944

Papilio sylvanus Esper, 1777 (currently known as *Ochlodes sylvanus* or *O. venatus faunus*; Insecta, Lepidoptera): specific name conserved

Keywords. Nomenclature; taxonomy; Lepidoptera; HESPERIIDAE; LYCAENIDAE; *Augiades sylvanus*; *Ochlodes sylvanus*; *Anthene sylvanus*; butterflies; skippers; hairtails.

Ruling

(1) Under the plenary power it is hereby ruled that the specific name *sylvanus* Esper, 1777, as published in the binomen *Papilio sylvanus*, is not invalid by reason of being a junior primary homonym of *Papilio sylvanus* Drury, 1773.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *sylvanus* Drury, 1773, as published in the binomen *Papilio sylvanus*;

(b) *sylvanus* Esper, 1777, as published in the binomen *Papilio sylvanus* (not invalid by the ruling in (1) above).

History of Case 3046

An application for the conservation of the specific name of *Papilio sylvanus* Esper, 1777 was received from Dr A.L. Devyatkin (*Moscow State University, Moscow, Russia*) on 13 May 1997. After correspondence the case was published in BZN **54**: 231–235 (December 1997). Notice of the case was sent to appropriate journals.

A comment in support of the application from Dr P. Sigbert Wagener (*Bocholt, Germany*) was published in BZN **55**: 105–106 (June 1998). Dr Wagener noted that Esper's description of *Papilio sylvanus* (p. 343) dated from 1779, but the specific name was available from its appearance on pl. 36, published in 1777 (cf. para. 2 of the application).

An opposing comment from Dr R. de Jong (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*) & Dr O. Karsholt (*Zoologisk Museum, Copenhagen, Denmark*) was published in BZN **55**: 169–171 (September 1998). A reply by the author of the application was published in BZN **56**: 63–65 (March 1999).

Since the generic name *Ochlodes* Scudder, 1872 is masculine, the included species discussed in this case should be known as *O. sylvanus* and *O. venatus*.

Decision of the Commission

On 1 September 1999 the members of the Commission were invited to vote on the proposals published in BZN **54**: 233. At the close of the voting period on 1 December 1999 the votes were as follows:

Affirmative votes — 14: Bock, Bouchet, Cocks, Dupuis, Eschmeyer, Heppell, Kerzhner, Kraus, Mahnert, Mawatari, Nielsen, Papp, Schuster, Song

Negative votes — 7: Brothers, Cogger, Macpherson, Minelli, Patterson, Savage and Štys.

No vote was received from Martins de Souza.

Lehtinen and Ride were on leave of absence.

Brothers commented: 'It is not obvious to me, from the information provided, that the use of the plenary power in this case will aid in promoting stability in the nomenclature'.

Original references

The following are the original references to the names placed on an Official List by the ruling given in the present Opinion:

sylvanus, *Papilio*, Drury, 1773, *Illustrations of natural history; wherein are exhibited ... figures of exotic insects*, vol. 2, p. 5.

sylvanus, *Papilio*, Esper, 1777, *Die Schmetterlinge in Abbildungen nach der Natur mit Beschreibungen*, Theil 1 (Europäische Gattungen), pl. 36, suppl. 12, fig. 1.

OPINION 1945

Scarus chrysopterus Bloch & Schneider, 1801 (currently *Sparisoma chrysopterum*; Osteichthyes, Perciformes): specific name conserved and designated as the type species of *Sparisoma* Swainson, 1839

Keywords. Nomenclature; taxonomy; Osteichthyes; Perciformes; SCARIDAE; *Sparisoma*; *Sparisoma abildgaardi*; *Sparisoma chrysopterum*; parrot fishes; Caribbean; Western Atlantic.

Ruling

(1) Under the plenary power:
  (a) the specific name *abildgaardi* Bloch, 1791, as published in the binomen *Sparus abildgaardi*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
  (b) all previous fixations of type species for the nominal genus *Sparisoma* Swainson, 1839 are hereby set aside and *Scarus chrysopterus* Bloch & Schneider, 1801 is designated as the type species.

(2) The name *Sparisoma* Swainson, 1839 (gender: neuter), type species by designation under the plenary power in (1)(b) above *Scarus chrysopterus* Bloch & Schneider, 1801, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *chrysopterus* Bloch & Schneider, 1801, as published in the binomen *Scarus chrysopterus* (specific name of the type species of *Sparisoma* Swainson, 1839), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *abildgaardi* Bloch, 1791, as published in the binomen *Sparus abildgaardi* and as suppressed in (1)(a) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 3051

An application for the conservation of the specific name of *Scarus chrysopterus* Bloch & Schneider, 1801, and designation of the species as the type of *Sparisoma* Swainson, 1839, was received from Dr Rodrigo L. Moura (*Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil*) and Dr John E. Randall (*Bernice P. Bishop Museum, Honolulu, Hawaii, U.S.A.*) on 25 June 1997. After correspondence the case was published in BZN **55**: 151–154 (September 1998). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 September 1999 the members of the Commission were invited to vote on the proposals published in BZN **55**: 153. At the close of the voting period on 1 December 1999 the votes were as follows:

Affirmative votes — 19: Bock, Brothers, Cocks, Dupuis, Eschmeyer, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Mawatari, Minelli, Nielsen, Papp, Patterson, Savage, Schuster, Song, Štys (part)

Negative votes — 2: Bouchet and Cogger.

No vote was received from Martins de Souza.

Lehtinen and Ride were on leave of absence.

In voting against Cogger commented: 'Given the levels of taxonomic subjectivity involved, I do not believe that suppression of the older name *abildgaardi* or a change in the type species of *Sparisoma* are warranted. The authors' objective could have been achieved by simply giving precedence to *chrysopterus* whenever it and *abildgaardi* are considered to be conspecific'. Štys voted in favour of the suppression of the name *abildgaardi* but against the designation of *Scarus chrysopterus* as the type species of *Sparisoma*; he commented: 'I cannot see any reason why the nominal species *Sparus abildgaardi* should not stand as the type species of *Sparisoma* despite having been suppressed (cf. Articles 67.1.2 and 81.2.1 of the Code)'.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

abildgaardi, *Sparus*, Bloch, 1791, *Naturgeschichte der ausländischen Fische*, part 4, p. 22.

chrysopterus, *Scarus*, Bloch & Schneider, 1801, *Systema Ichthyologiae iconibus cx illustratum*, p. 286.

Sparisoma Swainson, 1839, *The natural history and classification of fishes, amphibians, and reptiles, or monocardian animals*, vol. 2, p. 227.

OPINION 1946

Osphronemus deissneri Bleeker, 1859 (currently *Parosphromenus deissneri*; Osteichthyes, Perciformes): holotype replaced by a neotype

Keywords. Nomenclature; taxonomy; Osteichthyes; Perciformes; BELONTIIDAE; *Parosphromenus*; *Parosphromenus deissneri*; licorice gouramies.

Ruling

(1) Under the plenary power all previous fixations of type specimens for the nominal species *Osphronemus deissneri* Bleeker, 1859 are hereby set aside and specimen no. ZRC 31377 in the Zoological Reference Collection, National University of Singapore, is designated as the neotype.

(2) The name *Parosphromenus* Bleeker, 1877 (gender: masculine), type species by monotypy *Osphronemus deissneri* Bleeker, 1859, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *deissneri*, as published in the binomen *Osphromenus* [sic] *deissneri* Bleeker, 1859 and as defined by the neotype designated in (1) above (specific name of the type species of *Parosphromenus* Bleeker, 1877), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3071

An application to set aside the holotype of *Osphronemus deissneri* Bleeker, 1859 and to designate a neotype was received from Dr P.K.L. Ng (*National University of Singapore, Republic of Singapore*) and Dr Maurice Kottelat (*Cornol, Switzerland*) on 16 October 1997. After correspondence the case was published in BZN **55**: 155–158 (September 1998). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 September 1999 the members of the Commission were invited to vote on the proposals published in BZN **55**: 157, with the addition of the placement of *Parosphromenus* Bleeker, 1877 on the Official List. At the close of the voting period on 1 December 1999 the votes were as follows:

Affirmative votes — 19: Bock, Bouchet, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kraus, Macpherson, Mahnert, Mawatari, Minelli, Nielsen, Papp, Patterson, Savage, Schuster, Song

Negative votes — 2: Kerzhner and Štys.

No vote was received from Martins de Souza.

Lehtinen and Ride were on leave of absence.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

deissneri, *Osphronemus*, Bleeker, 1859, *Natuurkundig Tijdschrift voor Nederlandsch Indië*, **18**: 376.

Parosphromenus Bleeker, 1877, *Atlas ichthyologique des Indes orientales néêrlandaises*, vol. 9 (Percoides 3), pl. 395, caption of fig. 1.

OPINION 1947

Iguanodon Mantell, 1825 (Reptilia, Ornithischia): *Iguanodon bernissartensis* Boulenger in Beneden, 1881 designated as the type species, and a lectotype designated

Keywords. Nomenclature; taxonomy; Ornithischia; IGUANODONTIDAE; *Iguanodon*; *Iguanodon bernissartensis*; iguanodons; Lower Cretaceous.

Ruling

(1) Under the plenary power:
  (a) all previous fixations of type species for the nominal genus *Iguanodon* Mantell, 1825 are hereby set aside and *Iguanodon bernissartensis* Boulenger in Beneden, 1881 is designated as the type species;
  (b) all previous fixations of type specimens for the nominal species *Iguanodon bernissartensis* Boulenger in Beneden, 1881 are hereby set aside and skeleton Q, catalogue no. IRSNB 1534 in the Institut Royal des Sciences Naturelles de Belgique, Brussels, is designated as the lectotype.

(2) The name *Iguanodon* Mantell, 1825 (gender: masculine), type species by designation in (1)(a) above *Iguanodon bernissartensis* Boulenger in Beneden, 1881, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *bernissartensis* Boulenger in Beneden, 1881, as published in the binomen *Iguanodon bernissartensis* and as defined by the lectotype designated in (1)(b) above (specific name of the type species of *Iguanodon* Mantell, 1825) is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3037

An application to designate *Iguanodon bernissartensis* Boulenger in Beneden, 1881 as the type species of *Iguanodon* Mantell, 1825, and to designate a lectotype for *I. bernissartensis*, was received from the late Dr Alan J. Charig and Ms Sandra Chapman (*The Natural History Museum, London, U.K.*) on 13 January 1997. After discussion the case was published in BZN **55**: 99–104 (June 1998). Notice of the case was sent to appropriate journals.

Comments in support of the application from Prof David Norman (*The Sedgwick Museum, University of Cambridge, Cambridge, U.K.*) and from Dr Angela C. Milner (*The Natural History Museum, London, U.K.*) were published in BZN **55**: 172 (September 1998).

Further supportive comments from Dr Paul M. Barrett (*University of Cambridge, Cambridge, U.K.*) and from Dr Kenneth Carpenter (*Denver Museum of Natural History, Denver, Colorado, U.S.A.*) were published in BZN **55**: 239–240 (December 1998).

A comment from Dr Hans-Dieter Sues (*Royal Ontario Museum, Toronto, Ontario, Canada*), published in BZN **55**: 240–241, supported the designation of the skeleton in the Institut Royal des Sciences Naturelles de Belgique in Brussels as the lectotype of *Iguanodon bernissartensis*, but opposed the designation of the latter nominal species

as the type of *Iguanodon* Mantell, 1825. A reply by Prof Norman was published in BZN **56**: 65–66 (March 1999).

Decision of the Commission

On 1 September 1999 the members of the Commission were invited to vote on the proposals published in BZN **55**: 102–103. At the close of the voting period on 1 December 1999 the votes were as follows:

Affirmative votes — 21: Bock, Bouchet, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Mawatari, Minelli, Nielsen, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — none.

No vote was received from Martins de Souza.

Lehtinen and Ride were on leave of absence.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

bernissartensis, *Iguanodon*, Boulenger in Beneden, 1881, *Bulletin de l'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique*, Classe des Sciences, (3)**1**(5): 606.

Iguanodon Mantell, 1825, *Philosophical Transactions of the Royal Society*, **115**(1): 184.

OPINION 1948

Hydrosaurus gouldii Gray, 1838 (currently *Varanus gouldii*) and *Varanus panoptes* Storr, 1980 (Reptilia, Squamata): specific names conserved by the designation of a neotype for *H. gouldii*

Keywords. Nomenclature; taxonomy; Reptilia; Squamata; VARANIDAE; *Varanus gouldii*; *Varanus panoptes*; lizards; sand monitor; Gould's goanna; yellow-spotted monitor; Australia; New Guinea; Indonesia.

Ruling

(1) Under the plenary power:
  (a) all previous type fixations for the nominal species *Hydrosaurus gouldii* Gray, 1838 are hereby set aside and specimen BMNH 1997.1 in the Natural History Museum, London, collected from Karrakatta, Perth, Western Australia by G. Thompson on 29 September 1997 is designated as the neotype;
  (b) the following names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
    (i) *endrachtensis* Péron, 1807, as published in the binomen *Tupinambis endrachtensis*;
    (ii) *ocellarius* Blyth, 1868, as published in the binomen *Hydrosaurus ocellarius*.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *gouldii* Gray, 1838, as published in the binomen *Hydrosaurus gouldii* and as defined by the neotype designated in (1)(a) above;
  (b) *panoptes* Storr, 1980, as published in the binomen *Varanus panoptes* and as defined by the holotype (catalogue no. R44792 in the Western Australian Museum, Perth).

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:
  (a) *endrachtensis* Péron, 1807, as published in the binomen *Tupinambis endrachtensis* and as suppressed in (1)(b)(i) above;
  (b) *ocellarius* Blyth, 1868, as published in the binomen *Hydrosaurus ocellarius* and as suppressed in (1)(b)(ii) above.

History of Case 3042

An application for the conservation of the specific name of *Varanus gouldii* (Gray, 1838) for a monitor lizard found over most of Australia, and of *V. panoptes* Storr, 1980 for a species with a disjunct range in western and northern Australia, New Guinea and Indonesia, by the designation of a neotype for *H. gouldii* was received from Prof R.G. Sprackland, Prof H.M. Smith and Dr P.D. Strimple on 19 December 1996. After correspondence the case was published in BZN **54**: 95–99 (June 1997). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that a similar application was submitted by Dr Glenn M. Shea (*University of Sydney, New South Wales, Australia*) and Dr Harold G.

Cogger (*The Australian Museum, Sydney, New South Wales, Australia*) slightly later than that by Sprackland, Smith & Strimple.

A comment in support of the application from Dr D.R. King (*Western Australian Museum, Perth, Australia*) was published in BZN **54**: 249–250 (December 1997).

A comment from Shea & Cogger, published in BZN **55**: 106–111 (June 1998), supported the purpose of the application. They provided evidence that the specimen designated by Mertens (1958) as the lectotype of *V. gouldii* was unlikely to have been original material seen by Gray (1838), and noted that the designation was therefore of doubtful validity. Shea & Cogger proposed (BZN **55**: 109, paras. 13 and 14) that a well preserved specimen with precise locality, formerly of the Western Australian Museum, Perth, and now kept in the reptile collections of the Natural History Museum, London, should be designated as the neotype of *V. gouldii*, rather than the old, stuffed and mounted specimen, lacking locality information, proposed by Sprackland et al. Shea & Cogger also proposed (BZN **55**: 110) that two putative senior subjective synonyms of *V. gouldii* and *V. panoptes* (*Tupinambis endrachtensis* Péron, 1807 and *Hydrosaurus ocellarius* Blyth, 1868 respectively) should be suppressed.

A comment from Dr W. Böhme & Dr T. Ziegler (*Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn, Germany*) was published in BZN **55**: 173–174 (September 1998). They advocated the use of *V. flavirufus* Mertens, 1958 for the species found over most of Australia and *V. gouldii* for that with the disjunct range, as would result from acceptance of Mertens's lectotype designation for *V. gouldii*.

A reply by the authors of the application to the comments by Shea & Cogger and by Böhme & Ziegler was published in BZN **55**: 175–176 (September 1998). Sprackland et al. welcomed the modifications and additions to the original application proposed by Shea & Cogger.

A comment opposing the application from Mr R.T. Hoser (*Doncaster, Victoria, Australia*) was published in BZN **56**: 66–70 (March 1999). He quoted a statement made by Sprackland in 1995, but at that time Sprackland was not fully aware of the Code's provisions relating to type specimens, nor of the status of the specimens in the Natural History Museum, London. A reply from Mrs Anthea Gentry (*ICZN Secretariat, London, U.K.*) was published at the same time.

Decision of the Commission

On 1 September 1999 the members of the Commission were invited to vote on the combined proposals published in BZN **54** : 98 and **55**: 109 (paras. 13 and 14) and 110. At the close of the voting period on 1 December 1999 the votes were as follows:

Affirmative votes — 20: Bock, Bouchet (part), Brothers, Cocks, Cogger, Eschmeyer, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Mawatari, Minelli, Nielsen, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — 1: Dupuis.

No vote was received from Martins de Souza.

Lehtinen and Ride were on leave of absence.

Bouchet voted for the designation of a neotype for *Varanus gouldii* but not for the suppression of the specific names of *Tupinambis endrachtensis* Péron, 1807 and *Hydrosaurus ocellarius* Blyth, 1868. Brothers commented: 'It is obvious that whatever

the ruling on *Varanus gouldii* and *V. panoptes*, some workers will not be satisfied. However, my view is that approval of the proposed neotype for *V. gouldii* will provide the clearest solution'.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

endrachtensis, *Tupinambis*, Péron, 1807, *Voyage de découvertes aux Terres Australes, exécuté par ordre de Sa Majesté L'Empereur et Roi, sur les Corvettes* le Géographe, le Naturaliste, *et la Goélette* le Casuarina, *pendant les années 1800, 1801, 1802, 1803 et 1804*, vol. 1, p. 118.

gouldii, *Hydrosaurus*, Gray, 1838, *Annals of Natural History; or, Magazine of Zoology, Botany and Geology*, **1**: 394.

ocellarius, *Hydrosaurus*, Blyth, 1868, *in* Theobald, W., *Journal of the Asiatic Society of Bengal*, **37**(2)(extra number): 21.

panoptes, *Varanus*, Storr, 1980, *Records of the Western Australian Museum*, **8**(2): 273.

OPINION 1949

Cacatua Vieillot, 1817 and CACATUINAE Gray, 1840 (Aves, Psittaciformes): conserved

Keywords. Nomenclature; taxonomy; Aves; PSITTACIDAE; CACATUINAE; *Cacatua*; *Cacatua alba*; cockatoos; Australasia; southwest Pacific; Indonesia.

Ruling

(1) Under the plenary power the following names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) the generic names:
      (i) *Kakatoe* Cuvier, 1800;
      (ii) *Cacatoes* Duméril, 1805;
      (iii) *Catacus* Rafinesque, 1815;
      (iv) *Plyctolophus* Vieillot, 1816;
   (b) the specific name *cristatus* Linnaeus, 1758, as published in the binomen *Psittacus cristatus*.

(2) The name *Cacatua* Vieillot, 1817 (gender: feminine), type species by subsequent designation by Salvadori (1891) *Cacatua cristata* Vieillot, 1817 (a junior subjective synonym of *Psittacus albus* Müller, 1776), is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *albus* Müller, 1776, as published in the binomen *Psittacus albus* (senior subjective synonym of the specific name of *Cacatua cristata* Vieillot, 1817, the type species of *Cacatua* Vieillot, 1817), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name CACATUINAE Gray, 1840 (type genus *Cacatua* Vieillot, 1817) is hereby placed on the Official List of Family-Group Names in Zoology.

(5) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:
   (a) *Kakatoe* Cuvier, 1800, as suppressed in (1)(a)(i) above;
   (b) *Cacatoes* Duméril, 1805, as suppressed in (1)(a)(ii) above;
   (c) *Catacus* Rafinesque, 1815, as suppressed in (1)(a)(iii) above;
   (d) *Plyctolophus* Vieillot, 1816, as suppressed in (1)(a)(iv) above.

(6) The name *cristatus* Linnaeus, 1758, as published in the binomen *Psittacus cristatus* and as suppressed in (1)(b) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

(7) The name PLYCTOLOPHINAE Vigors, 1825 is hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology (invalid because the name of the type genus, *Plyctolophus* Vieillot, 1816, has been suppressed in (1)(a)(iv) above).

History of Case 1647

An application for the conservation of the generic name *Cacatua* Vieillot, 1817 and the subfamily name CACATUINAE Gray, 1840 was received from Prof Walter J. Bock (*Columbia University, New York, N.Y., U.S.A.*) and Dr Richard Schodde (*Australian*

National Wildlife Collection, CSIRO Wildlife and Ecology, Lyneham, A.C.T., Australia) on 24 March 1994. After correspondence the case was published in BZN **55**: 159 164 (September 1998). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that the application had the support of members of the Standing Committee on Ornithological Nomenclature (SCON) (para. 3 on BZN **55**: 160).

Decision of the Commission

On 1 September 1999 the members of the Commission were invited to vote on the proposals published in BZN **55**: 162. At the close of the voting period on 1 December 1999 the votes were as follows:

Affirmative votes — 19: Bock, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kraus, Macpherson, Mahnert, Mawatari, Minelli, Nielsen, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — 2: Bouchet and Kerzhner.

No vote was received from Martins de Souza.

Lehtinen and Ride were on leave of absence.

Bouchet considered that the application should have evaluated in more detail the consequences of attributing the name *Cacatua* to Brisson (1760). He also commented that the name *Psittacus cristatus* could have been attributed to Linnaeus (1758), rather than to Vieillot (1817), by means of an appropriate lectotype or neotype designation in the sense of *P. albus* Müller, 1776. Kerzhner commented: 'I completely support the main idea of the proposal, and I regret that I vote against. It would have been more logical to solve the problem of the type species of *Cacatua* Vieillot, 1817 by use of the plenary power to set aside all previous type designations and to fix *Psittacus albus* Müller, 1776 as the type species'.

Original references

The following are the original references to the names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:

albus, *Psittacus*, Müller, 1776, *Des Ritters Carl von Linné Natursystems Supplements und Register Band*, p. 76.

Cacatoes Duméril, 1805, *Zoologie analytique, ou méthode naturelle de classification des animaux*, pp. 50, 51.

Cacatua Vieillot, 1817, *in*: *Nouveau Dictionnaire d'Histoire Naturelle*, vol. 17, p. 6.

CACATUINAE Gray, 1840, *A list of the genera of birds, with an indication of the typical species of each genus*, p. 53.

Catacus Rafinesque, 1815, *Analyse de la Nature, ou Tableau de l'Univers et des Corps Organisés*, p. 64.

cristatus, *Psittacus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 99.

Kakatoe Cuvier, 1800, *Leçons d'anatomie comparée de G. Cuvier, recueilles et publiées sous ses yeux par C. Duméril et G.-L. Duvernoy*, vol. 1, table 2.

PLYCTOLOPHINAE Vigors, 1825, *Zoological Journal*, **2**: 400.

Plyctolophus Vieillot, 1816, *Analyse d'une nouvelle ornithologie élémentaire*, p. 26.

The following is the reference for the designation under Article 69.2.2 of the Code of *Cacatua cristata* Vieillot, 1817 (a junior subjective synonym of *Psittacus albus* Müller, 1776) as the type species of the nominal genus *Cacatua* Vieillot, 1817:

Salvadori, T. 1891. *In* Sharpe, R.D. (Ed.), *Catalogue of the birds in the collection of the British Museum*, vol. 20, pp. 115, 124.

INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

General. Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

Text. Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

References. These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

Submission of Application. Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

Rulings of the Commission

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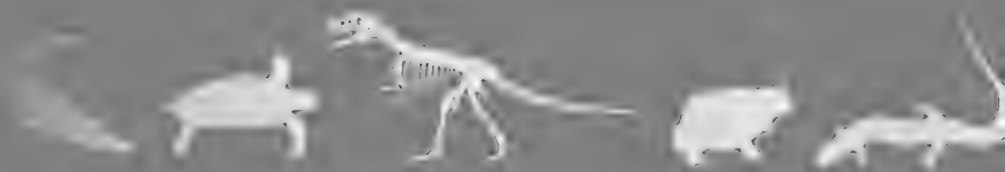
The Bulletin of Zoological Nomenclature



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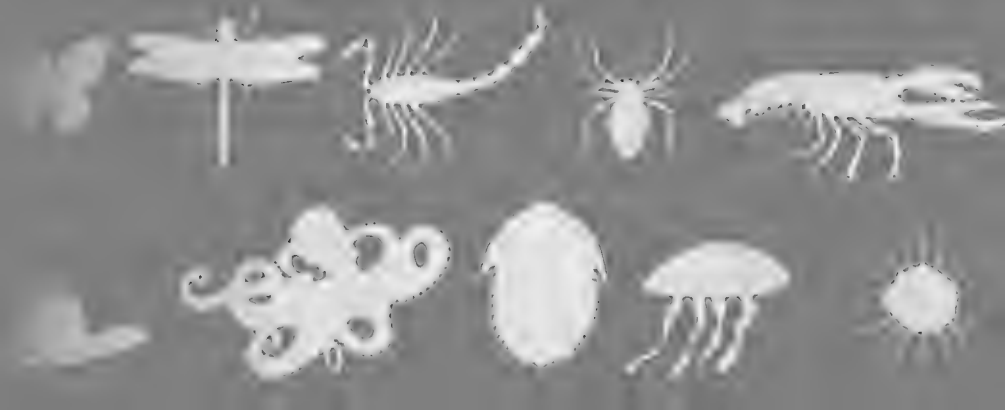

THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The *Bulletin* is published four times a year for the International Commission on Zoological Nomenclature by the International Trust for Zoological Nomenclature, a charity (no. 211944) registered in England. The annual subscription for 2000 is £110 or $200, postage included. All manuscripts, letters and orders should be sent to:

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 57, part 2 (pp. 69–136) 30 June 2000

Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 57, part 1 (published on 31 March 2000). Under Article 82 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) HIPPOPODIUSIDAE Koellicker, 1853 (Cnidaria, Hydrozoa): proposed conservation as the correct spelling of HIPPOPODIIDAE to remove homonymy with HIPPOPODIIDAE Cox, 1965 (Mollusca, Bivalvia). (Case 3153). A.C. Marques, L.E. Anuelli & M.G. Simões.

(2) *Scymnus splendidulus* Stenius, 1952 (currently *Nephus* (*Sidis*) *splendidulus*; Insecta, Coleoptera): proposed retention of the neotype as the name-bearing type despite rediscovery of the holotype. (Case 3154). H. Fürsch & H. Silfverberg.

(3) MACROTERMITINAE Kemner, 1934 (Insecta, Isoptera): proposed precedence over ACANTHOTERMITINAE Sjöstedt, 1926. (Case 3155). M.S. Engel & K. Krishna.

(4) *Chiton lepidus* Reuss, 1860 (currently *Lepidochitona lepida*; Mollusca, Polyplacophora): proposed conservation of the specific name. (Case 3156). E. Schwabe.

(5) *Halictoides dentiventris* Nylander, 1848 (currently *Dufourea dentiventris*; Insecta, Hymenoptera): proposed conservation of the specific name. (Case 3157). P.A.W. Ebmer.

(d) *Rulings of the Commission.* Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin*.

The International Code of Zoological Nomenclature

The new and extensively revised 4th Edition of the *International Code of Zoological Nomenclature* was published in August 1999 and came into effect on 1 January 2000; it entirely supersedes the 3rd (1985) edition. Some notes about the new edition, which contains many new provisions, will be found on the Commission's Website (www.iczn.org).

The price of the 4th Edition is £40 or $65; the following discounts are offered:

Individual members of a scientific society ordering one copy for personal use are offered a discount of 25% (price £30 or $48); the name and address of the society should be given.

Individual members of the American or European Associations for Zoological Nomenclature ordering one copy for personal use are offered a discount of 40% (price £24 or $39).

Postgraduate or undergraduate students ordering one copy for personal use are offered a discount of 25% (price £30 or $48); the name and address of the student's supervisor should be given.

Institutions or agents buying 5 or more copies are offered a 25% discount (price £30 or $48 for each copy).

Prices include surface postage; for Airmail please add £2 or $3 per copy.

Copies may be ordered from: ITZN, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk) or AAZN, Attn. D.G. Smith, MRC-159, National Museum of Natural History, Washington, D.C. 20560–0159, U.S.A. (e-mail: smithd@nmnh.si.edu).

Payment should accompany orders. Cheques should be made out to 'ITZN' (sterling or dollars) or to 'AAZN' (dollars only). Payment to ITZN (but not to AAZN) can also be made by credit card (Visa or MasterCard only) giving the cardholder's number, name and address and the expiry date.

Individual purchasers of the Code are offered a 50% discount on one copy of the following publications for personal use:

The Official Lists and Indexes of Names and Works in Zoology (1987) — reduced from £60 to £30 and from $110 to $55;

Towards Stability in the Names of Animals a History of the International Commission on Zoological Nomenclature 1895–1995 (1995) — reduced from £30 to £15 and from $50 to $25;

The Bulletin of Zoological Nomenclature (the Commission's quarterly journal) — discount valid for up to 5 years; for 2000 the discounted price would be £55 or $100.

The Code is published in a bilingual volume (English and French). Official texts in a number of other languages are planned and their availability will be announced on the Commission's Website. The Spanish text has been published; details from e-mail: mcnb168@mncn.csic.es, fax (+34) 915645078.

The linguistic appendices in the 3rd Edition have not been included in the new edition; copies of these may be obtained without charge from ITZN.

The names of animals

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This article originally appeared in *Trends in Ecology & Evolution* (December 1999, vol. 14, pp. 462 463). It is reproduced here by permission of Elsevier Science.

When using a tool, we hardly wonder about its origin. What we expect from it is that it works efficiently. Some tools are obviously old, we found them there when we entered the business. They may look out of fashion now but, as long as they work, we keep using them. With time passing, however, these tools can become fragile and less reliable and we are tempted to throw them away. Suddenly, we wonder how we could have used them until yesterday without seeing their obvious shortcomings. We cannot replace them easily, however. Sooner or later we discover they are still being produced and sold. One of these old dear tools is the Linnaean names of animals and plants.

We may have been using Linnaean names for years, however, without giving any thought to how these names were first introduced, and why. Our worries begin instead when we notice that the rainbow trout is now called *Onchorhynchus mykiss* rather than *Salmo gairdneri*, as it was called until 'yesterday'; or that the blue-bottle fly is currently *Calliphora vicina* rather than *Calliphora erythrocephala*. Why these disconcerting changes? Are there no rules to the usage of names?

Yes, there are. Soon after he came back from his memorable journey on the *Beagle*, Charles Darwin became a member of a committee established by the British Association for the Advancement of Science which produced in 1842 a *Series of Propositions for Rendering the Nomenclature of Zoology Uniform and Permanent*. This document, known as the *Strickland Code* after the Committee's leader Hugh Strickland, was the first set of rules proposed to set order to the entangled wilderness of the rapidly growing binomial nomenclature introduced by Linnaeus. The first internationally accepted document, however, did not appear until 1905, with the publication of the *Règles internationales de la nomenclature zoologique* (International Commission on Zoological Nomenclature, 1905). This first zoological Code was produced by an International Commission on Zoological Nomenclature (ICZN) established in 1895 by the International Congress of Zoology held in Leiden, The Netherlands (Melville, 1995). The *Règles* remained in force until 1961, when they were replaced by the first edition of the *International Code of Zoological Nomenclature* (further editions were produced in 1964 and 1985). More than one century after it was established, ICZN has now published the fourth edition of the Code (International Commission on Zoological Nomenclature, 1999). Its provisions came in force on 1 January 2000.

Most changes introduced in this edition are strictly of concern to practising taxonomists but some new provisions are likely to affect all users of names. The single best quality of a scientific name is, to be sure, stability. To put aside the familiar name currently used, in whatever branch of pure or applied biology, to replace it with a

completely ignored senior synonym unearthed by some nomenclature fanatic in a dusty copy of a long extinct journal does not seem to be profitable to science. On the other hand, some rule is necessary. Unfortunately, synonymy (two or more names for the same organism) and homonymy (same name for two or more organisms) are very widespread and priority is the obvious prime criterion to use in selecting among the alternative synonyms and homonyms. This principle has been firmly stated in all editions of the Code. In those cases where it might seem advisable to suspend its application to the benefit of nomenclatural stability, it has been possible to place with the Commission an application explaining the pros and cons of strict priority versus established usage. Applications are published in the *Bulletin of Zoological Nomenclature*, which leads to public debate and a final vote by the Commission. This procedure is well established (nearly two thousand Opinions have been issued by the Commission over the years), but exceedingly slow. Things become more expedite with the new Code, at least in the more blatant cases. Established usage will win over priority if the earlier synonym or homonym has not been used as a valid name since 1899, whereas the later one has been used by at least 10 authors in 25 publication during the past 50 years. Under these conditions, there is no longer any need to apply to the Commission for maintaining current usage.

To prevent further generation of new homonyms, two provisions would be necessary; first, a general inventory of all existing names and, second, a system of registration for new names. These provisions have been successfully adopted by bacteriologists since 1980. To do the same with animal names would be much more difficult, because of the sheer number of names involved, but it would be also much more useful, in the light of an increasingly stabilized nomenclature. Provisions for the registration of names (or of the works where these are published) have been long debated by ICZN and the zoological community at large but, unfortunately, a workable solution has not yet been found. This is the major challenge for a future fifth edition of the Code. In the meantime, however, some progress has been made. First, a new provision of the Code allows the Commission to adopt officially comprehensive lists of names of genera and/or species in major taxonomic fields: this amounts to breaking down into workable stages the formidable task of listing all names in a document comparable to the *Approved List of Names of Bacteria* (Skerman, McGowan & Sneath, 1980). Second, it is strongly recommended that all new names be brought to the attention of the *Zoological Record*, an old friend of taxonomists (and other researchers).

A basic requirement of zoological nomenclature is that new names must be published, but what published actually means today is not necessarily the same as ten years ago. Publication criteria have been changed accordingly in the new Code, allowing for works not published on paper, although with provisos requiring their production in numerous identical, durable and unalterable copies and listing major public libraries where the work has been deposited.

Are these nomenclatural changes of any interest for ecologists and evolutionary biologists?

As users of the scientific names of animals, they will benefit from the increased stability of nomenclature that is likely to derive from the new provisions. This will be especially useful to students of biodiversity, who are often confronted with long species lists, whose comparability over time and between areas is often undermined by an unpredictable amount of synonymy and, to a lesser degree, homonymy.

However, I believe that the future of biological nomenclature will cross the path of evolutionary biology in a much more lively fashion than in the past. Biological nomenclature passed through the Darwinian revolution practically unchanged. Since the Hennigian (cladistic) revolution, however, some voices have been raised against the inadequacy of the Linnaean hierarchy (Griffiths, 1974, 1976; Ax, 1987) and some efforts have been already produced towards the development of an alternative, rankless classification (de Queiroz & Gauthier, 1990, 1994; Bryant, 1994; Sundberg & Pleijel, 1994; Lee, 1996; de Queiroz, 1997; Cantino, 1998). In the future, Linnaean and non-Linnaean classifications might exist side-by-side (Minelli, 1991). At any rate, the publication of the new zoological Code is a good opportunity to open the debate. Otherwise, both parties are likely to go astray: Linnaean-style taxonomists on one side, patiently continuing to produce names that others are unwilling to use, and phylogeneticists, on the other, perhaps too ready to change the rules. It took one century from Linnaeus to the *Strickland Code*, and another 60 years to the *Régles*. Let's talk to one another. Rules can still evolve but a Code, historically, follows and consolidates practice. It does not establish it from scratch.

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Case 3088

Doris verrucosa Linnaeus, 1758 (Mollusca, Gastropoda): proposed conservation of the generic and specific names by designation of a neotype

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Abstract. The purpose of this application is to conserve the prevailing usage of the generic and specific names of the Atlantic/Mediterranean nudibranch *Doris verrucosa* Linnaeus, 1758 by the designation of a neotype. The binomen is in long-accepted use for a well-known European and North American species, and *Doris* is the type genus of the family DORIDIDAE Rafinesque, 1815. However, *Doris verrucosa* had originally been introduced for one (or more) taxonomic species from the Indian Ocean; these probably belonged to the PHYLLIDIIDAE, which is placed in a different superfamily from the DORIDIDAE.

Keywords. Nomenclature; taxonomy; Gastropoda; Nudibranchia; DORIDIDAE; *Doris*; *Doris verrucosa*; *Doris derelicta*; *Doridigitata*; *Staurodoris*; Atlantic; Mediterranean.

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1. Linnaeus (1758, p. 653) erected the nudibranch genus *Doris* to contain the single species *D. verrucosa*, with the description:
"Doris. *Corpus oblongum, subtus planum. Tentacula ad os circiter octo.* [Body oblong, flattened ventrally. Eight tentacles surrounding the mouth].
verrucosa. *Doris corpore supra tuberculato.* [Dorsum with tubercles]
Rumph. mus. 38. Limax marina verrucosa.
Seb. mus. 2. t. 61. f. 5. Mitella verrucosa.
Habitat in Oceano.
Corpus oblongum, semicylindricum, convexum, extremitatibus rotundatis, supra verrucosum. Margo lateralis deflexus.
Pes ut in Limace, ovalis, oblongus margine plano. Os tentaculis brevissimis, circiter octo."

Linnaeus did not mention any specimen of *D. verrucosa* as having been seen by himself, and the description was probably based on the two references cited. The reference to Seba (1735, pl. 61, fig. 5) refers to an illustration of a nudibranch which is probably *Phyllidiella pustulosa* (Cuvier, 1804) (PHYLLIDIIDAE), a common tropical Indo-Pacific species. The other reference (Rumphius, 1705, p. 38) is a short description, not detailed enough to permit identification but which could possibly represent a phyllidiid nudibranch. If the present application is accepted the possible synonymy between *P. pustulosa* (Cuvier, 1804) and *D. verrucosa* Linnaeus, 1758 will be removed.

2. In a subsequent edition of the *Systema Naturae*, Linnaeus (1767, p. 1083) corrected the original description of *Doris* by stating that the tentacles [=gills]

surround the anus, not the mouth, and he expanded *Doris* to include three additional species. The description of, and bibliographical indications referring to, *D. verrucosa* were repeated with a minor change: "*D[oris] oblonga, corpore supra undique tuberculato*", and the habitat is now given as "Oceano Indico".

3. The name *Doris* has subsequently been applied to encompass nearly all nudibranchs of the order Doridida, which currently includes several superfamilies. However, the family PHYLLIDIIDAE is remarkable among dorid nudibranchs for having a dorsal or ventral anus not surrounded by gills, so that it is one of the few dorid families for which the name *Doris* has never been used.

4. Pennant (1777, p. 36) applied the name *Doris verrucosa* to a British species from Aberdeen, Scotland, at the same time providing a short description and an illustration (pl. 21, fig. 23). Pennant's application of the name *Doris verrucosa* differs from both Linnaeus's original concept and the modern application. Thompson & Brown (1984) identify the species described by Pennant as *Onchidoris bilamellata* (Linnaeus, 1767).

5. Cuvier (1804) discussed the doubtful identity of Linnaeus's nominal species, and (p. 467, pl. 1, figs. 4–6) applied the name *Doris verrucosa* to a dorid from "Ile de France" [Mauritius] which was known to him from preserved specimens. He commented that he used the name *D. verrucosa* because it well matched the Mauritian species even though Seba's illustration, referred to by Linnaeus, was that of a chiton (however, in stating this, Cuvier apparently confused Seba's pl. 61, fig. 4, which indeed represents a chiton, with fig. 5). The excellent quality of Cuvier's illustrations and the scientific influence of his writings probably explain why his authorship of the name *Doris verrucosa* was often cited by subsequent authors.

6. Rapp (1827, p. 517) used the name *Doris verrucosa* Linnaeus for a dorid from Naples, Italy, which in his opinion had the same characteristics as Linnaeus's and Cuvier's species but differed from that of Montagu; this reference to "Montagu" was probably an error for Pennant (see para. 4 above), because Montagu never used the name *Doris verrucosa* in any of his works. Following Rapp (1827) the name *Doris verrucosa* was applied by European zoologists (Delle Chiaje (1828, p. 129, 133, pl. 38, figs 14, 23); Philippi (1836, p. 104); d'Orbigny (1839, p. 39); and numerous subsequent authors) exclusively to the common Atlantic/Mediterranean nudibranch which is characterised by hemispherical tubercles on the notum, numerous unipinnate branchial leaves and long rhinophores. This very well-known species is distributed throughout the Mediterranean and the Atlantic European coast from the south coasts of the British Isles to the Azores (Thompson & Brown, 1984), and also on the eastern coast of North America (Franz, 1970).

7. Fischer (1867, pp. 7–8) recognized that the specific name *verrucosa* Linnaeus, 1758 originally referred to a species from the Indian Ocean and should not be used for the European species; he accordingly introduced the name *Doris derelicta* for the latter. The specific name *derelicta* Fischer, 1867, combined with *Doris* or *Doridigitata* (see para. 9 below), has been sporadically treated as valid since its original description (e.g. Lafont, 1868; Taslé, 1870; Beltremieux, 1884; Locard, 1886; Iredale & O'Donoghue, 1923). However, its usage has been discontinued in modern times.

8. The uncertainty of the identity of the species denoted by the name *Doris verrucosa* Linnaeus, 1758 was discussed by Bergh (1878, p. 579). Ignoring Fischer's

(1867) discussion and specific name *derelicta*. Bergh proposed to disregard Linnaeus's original references and to apply the name "*Doris verrucosa* L. Cuvier" to the European species. A somewhat similar and nomenclaturally unorthodox view was later held by Pruvot-Fol (1934, p. 236–239). She regarded Cuvier as "premier réviseur" of the name *verrucosa* and suggested that the European species be called "*Doris verrucosa* L. (Cuvier)"; she rightly noted that it would be "de gros inconvénients" to transfer the name *Doris* to the PHYLLIDIIDAE. Eliot (1910, p. 94) criticized Bergh's nomenclature, but, although he conceded "It is true that the animal [*Doris verrucosa*] cannot be recognized from Linnaeus' description", he continued to apply the name *Doris verrucosa* Linnaeus to the European species. Despite their differing opinions on how to cite the authorship of the name *Doris verrucosa*, Bergh, Eliot and Pruvot-Fol all agreed in applying it to the Atlantic/European species and with the single exception of Iredale & O'Donoghue (1923; see para. 9 below) their view prevailed throughout the 20th century. The name *Doris verrucosa* is in current general use for the European species in taxonomic works (e.g. Marcus & Marcus, 1967; Schmekel, 1968; Schmekel & Portmann, 1982; Thompson & Brown, 1984; Just & Edmunds, 1985), illustrated popular guides (e.g. Riedl, 1983; Cattaneo-Vietti, Chemello & Gianuzzi-Savelli, 1990; Picton & Morrow, 1994; Weinberg, 1994) and regional check-lists of marine molluscs (e.g. Cervera et al., 1988; Sabelli, Gianuzzi-Savelli & Bedulli, 1990; Seaward, 1990; Smith & Heppell, 1991). The species has also been the subject of investigations in the fields of cytology and karyology (Fodera, 1915; Mancino & Sordi, 1964; Ávila & Dufort, 1996) and chemistry (Ávila et al., 1990; Gavagnin et al., 1990; De Petrocellis et al., 1996). The name *Doris verrucosa* has not been applied to a species from the Indian Ocean since the very early 19th century (paras. 5 and 6 above).

9. The historical ambiguity in the application of the specific name *Doris verrucosa* has had consequences at genus level. D'Orbigny (1839, p. 39), discussing the nudibranchs of the Canary Islands, stated that the family DORIDIDAE contained several genera, and he divided *Doris* into discrete species groups which he treated as the subgenera *Doris* and *Doridigitata*. The latter contained the new species *D. bertheloti* from the Canary Islands, and "*Doris verrucosa* Linn" [in the European sense] was also placed in *Doridigitata*, even though according to modern rules this is automatically the type species of *Doris* (*Doris*) Linnaeus, 1758 by monotypy (so that *Doris* and *Doridigitata* are synonyms). Gray (1847, p. 164) fixed *Doris verrucosa* as the type species of *Doridigitata* (which he spelled as *Doris-digitata*); Iredale & O'Donoghue (1923, p. 229) mistakenly considered *D. bertheloti* to be the type species by monotypy. Since its original description the generic name *Doridigitata* has been used as valid only by Iredale & O'Donoghue (1923), who noted that this is "*Doris* of some authorities, not *Doris*, Linné, Syst. Nat., ed. 10, p. 653, 1758".

10. Bergh (1878, p. 578) rejected the name *Doridigitata* because he found it inappropriate, and introduced a new nominal genus *Staurodoris* to contain "*St. verrucosa* (Cuv.) M. mediterr.", *D. bertheloti*, and two other nominal species. The synonymy of *S. verrucosa* included "*D. verrucosa* L. Cuvier" and Bergh was evidently intending to use Linnaeus's name in the supposed sense of Cuvier; like other authors he ignored the fact that Cuvier had applied the name to a species from Mauritius. Iredale & O'Donoghue (1923, p. 229) subsequently designated "*Doris verrucosa*, Bergh, ex Cuvier" (i.e. *D. verrucosa* as interpreted by Bergh) as the type

species of *Staurodoris*, although they treated this generic name as a junior synonym of *Doridigitata*. Under Article 69.2.4 of the Code their action fixes the European species (denoted by its valid name) as the type species of *Staurodoris*, and if the present application is accepted the valid name of the species will be *D. verrucosa* Linnaeus, 1758 (and not *D. derelicta* Fischer, 1867). After its original establishment the name *Staurodoris* had a limited usage as a subgenus of *Doris* (Eliot, 1910), or as a full genus (*e.g.* Ihering, 1886; Gadzikiewicz, 1907). Neither *Doridigitata* nor *Staurodoris* has had any modern usage, whereas *Doris* has been consistently used in the recent literature for *D. verrucosa* (in the Atlantic/Mediterranean sense) and allied species (e.g. Thiele, 1931; Schmekel, 1968; Franc, 1968; Bouchet, 1977; Thompson, 1980; Ortea, Pérez-Sánchez & Llera, 1982).

11. The family-group name DORIDIDAE was introduced by Rafinesque (1815, p. 142; spelled as Doridia), based on *Doris* Linnaeus. Iredale & O'Donoghue (1923, p. 226), who rejected *Doris* as the valid generic name of the European species, logically also rejected the family name DORIDIDAE and erected DORIDIGITATIDAE based on *Doridigitata*. As far as we have ascertained, the name DORIDIGITATIDAE has not been used as valid since its original introduction, whereas DORIDIDAE is in wide general use.

12. The difficulties surrounding the applications of the name *Doris verrucosa* are obvious, and have been noted by those authors (Bergh, Eliot, Pruvot-Fol) who have explicitly favoured maintaining the long-established usage of the name for the European species. The authors (Fischer, Iredale & O'Donoghue) who rejected *Doris verrucosa* in favour of Fischer's (1867) *Doris* (or *Doridigitata*) *derelicta* did not apply the name *D. verrucosa* to a tropical species. We think that the only pragmatic solution to this very longstanding problem is to maintain current usage of both the generic and specific names by designating a neotype of *Doris verrucosa* that conforms to its application in the Atlantic/European literature. The nominal species *Doris derelicta* Fischer, 1867 was established to cover the same biological concept (para. 7) and is therefore a synonym. Since no type material of *D. derelicta* is known to exist it is advisable to make it an objective synonym by designating the neotype of *D. verrucosa* also the neotype of *D. derelicta*. A specimen from Castropol, Asturias (Atlantic coast of Spain) in the Muséum national d'Histoire naturelle, Paris, has the characters of *D. verrucosa* described in detail by Schmekel (1968), Ortea, Pérez-Sánchez & Llera (1982) and Thompson & Brown (1984), and it proposed that it be designated the neotype of both nominal species; it will be labelled accordingly.

13. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all previous fixations of type specimens for the nominal species *Doris verrucosa* Linnaeus, 1758 and *Doris derelicta* Fischer, 1867, and to designate as the neotype of both species the specimen in the Muséum national d'Histoire naturelle, Paris, mentioned in para. 12 above;

(2) to place on the Official List of Generic Names in Zoology the name *Doris* Linnaeus, 1758 (gender: feminine), type species by monotypy *Doris verrucosa* Linnaeus, 1758;

(3) to place on the Official List of Specific Names in Zoology the name *verrucosa* Linnaeus, 1758, as published in the binomen *Doris verrucosa* and as defined by the neotype designated in (1) above;

(4) to place on the Official List of Family-Group Names in Zoology the name DORIDIDAE Rafinesque, 1815, type genus *Doris* Linnaeus, 1758;

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:

(a) *Doridigitata* d'Orbigny, 1839 (a junior objective synonym of *Doris* Linnaeus, 1758);

(b) *Staurodoris* Bergh, 1878 (a junior objective synonym of *Doris* Linnaeus, 1758);

(6) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *derelicta* Fischer, 1867, as published in the binomen *Doris derelicta* and as defined by the neotype designated in (1) above (a junior objective synonym of *Doris verrucosa* Linnaeus, 1758;

(7) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name DORIDIGITATIDAE Iredale & O'Donoghue, 1923 (type genus *Doridigitata* d'Orbigny, 1839) (a junior objective synonym of DORIDIDAE Rafinesque, 1815).

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3133

Peristernia Mörch, 1852 (Mollusca, Gastropoda): proposed conservation of *Turbinella nassatula* Lamarck, 1822 as the type species

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Abstract. The purpose of this application is to conserve the usage of *Peristernia* Mörch, 1852 as the name of a genus in the marine gastropod family FASCIOLARIIDAE, with type species *Turbinella nassatula* Lamarck, 1822 by the designation of Melvill (1891). An earlier designation, of *Turbinella crenulata* Reeve, 1847 (currently *Clivipollia wagneri* (Anton, 1838)) by Cossmann (1889), would render *Peristernia* a senior subjective synonym of *Clivipollia* Iredale, 1929 in the BUCCINIDAE, but *Peristernia* has not been used in this sense.

Keywords. Nomenclature; taxonomy; Gastropoda; FASCIOLARIIDAE; *Peristernia*; *Peristernia nassatula*.

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1. Mörch (1852, p. 99) established the genus *Peristernia* for several nominal species of marine gastropods, among them '*crenulata* Reeve' (i.e. *Turbinella crenulata* of Reeve, 1847 (species 24, pl. 4, fig. 24) and '*nassatula* Lamarck' (*Turbinella nassatula* Lamarck, 1822, p. 110).

2. Of the six originally included species only *P. nassatula* (Lamarck) is currently classified in *Peristernia* and indeed in the family FASCIOLARIIDAE (type genus *Fasciolaria* Lamarck, 1799). The species called *Turbinella crenulata* by Reeve is now placed in *Clivipollia* Iredale, 1929 (p. 347) in the BUCCINIDAE (see Ponder, 1972, p. 264); three other of Mörch's nominal species are also now placed in the BUCCINIDAE and one is in the MURICIDAE.

3. Adams & Adams (1853–1854) listed 21 species in *Peristernia* but retained only three (including *P. crenulata* and *P. nassatula*) of Mörch's original ones; they (p. 153, [1853]) gave *P. nassatula* as the 'Example' of *Peristernia*, but this does not constitute a type species designation. Cossmann (1889, p. 166) designated *Turbinella crenulata* of Reeve, 1847 (which, as explained by Tapparone-Canefri (1879, pp. 321–322) is not the same species as *T. crenulata* Kiener, 1841, p. 45) as the type species but this has not been followed for more than a century (see para. 4 below). *Turbinella crenulata* in Reeve's sense was synonymised with *T. wagneri* Anton, 1838 (p. 71) by Tapparone-Canefri (1879, p. 322) and is a buccinid species now known as *Clivipollia wagneri*. Fischer (1880–1887, p. 617, [1884]) cited '*Latirus wagneri* (Anton)' as the type species of *Peristernia*, but since he did not mention its synonymy with *T. crenulata* Reeve this is not a valid type species fixation (Article 69.2.2 of the Code).

4. Melvill (1891, p. 378) designated *Turbinella nassatula* Lamarck as the type species of *Peristernia*, but this is an invalid designation since it had been preceded,

unknown to Melvill, by Cossmann's selection in 1889 of *T. crenulata* Reeve. Cossmann himself later (1901, p. 47) cited *T. nassatula* as the type species, without mentioning his previous selection of *T. crenulata* Reeve. *Peristernia nassatula* (Lamarck) has been repeatedly cited as the type species (relatively recent examples are Wenz, 1943, p. 1245; Cernohorsky, 1980, p. 115; Wilson, 1994, p. 73; Goto & Poppe, 1996, p. 394).

5. If Cossmann's designation in 1889 of *T. crenulata* Reeve, 1847 (i.e. *Clivipollia wagneri* (Anton, 1838)) as the type species were to be followed, *Peristernia* Mörch, 1852 would become a senior subjective synonym of *Clivipollia* Iredale, 1929, and would become the name of a genus in the BUCCINIDAE; the next available name to replace *Peristernia* in the FASCIOLARIIDAE seems to be *Ascolatirus* Bellardi, 1884 (p. 41), which is based on the Miocene fossil taxon *Latirus* (*Ascolatirus*) *borsoni* Bellardi, 1884 (*T. nassatula* is an extant tropical Indo-Pacific species). These changes in nomenclature would make correlation with all the existing literature very difficult and would be extremely confusing.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all fixations of type species for the nominal genus *Peristernia* Mörch, 1852 before the designation of *Turbinella nassatula* Lamarck, 1822 by Melvill (1891);

(2) to place on the Official List of Generic Names in Zoology the name *Peristernia* Mörch, 1852 (gender: feminine), type species by subsequent designation by Melvill (1891) *Turbinella nassatula* Lamarck, 1822, as ruled in (1) above;

(3) to place on the Official List of Specific Names in Zoology the name *nassatula* Lamarck, 1822, as published in the binomen *Turbinella nassatula* (specific name of the type species of *Peristernia* Mörch, 1852).

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Case 3135

Scyllarus orientalis Lund, 1793 (currently *Thenus orientalis*; Crustacea, Decapoda): proposed designation of a neotype

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Abstract. The purpose of this application is to designate a neotype for *Thenus orientalis* (Lund, 1793), a commercially important shovel-nose lobster (family SCYLLARIDAE). A revisionary study of *Thenus* Leach, 1815, long considered to be monotypic, has now recognised five species. All species are morphologically similar and identification can be difficult. A neotype for *T. orientalis* is needed as the remaining dry putative type specimen lacks all legs and mouthparts making certain identification impossible. Species of *Thenus* are found in shallow coastal waters throughout the tropical Indian and Western Pacific regions. The names *Thenus* and *T. orientalis* were placed on Official Lists in Opinion 519 (August 1958).

Keywords. Nomenclature; taxonomy; Crustacea; Decapoda; SCYLLARIDAE; *Thenus orientalis*; shovel-nose lobsters; Indian Ocean; West Pacific Ocean.

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1. *Thenus* Leach, 1815 (pp. 335, 338) is the sole genus of the subfamily THENINAE Holthuis, 1985 in the family SCYLLARIDAE Latreille, 1825. *Thenus* has been considered a monotypic genus, with only *Thenus orientalis* (Lund, 1793) (p. 22) recognised. *Thenus indicus* Leach, 1815 (p. 338), the nominal type species of the genus, has been treated as a synonym of *T. orientalis* for the past 150 years but in 1991 Holthuis (p. 227) noted: 'At present only a single species is recognised within the genus *Thenus*, but recent studies indicate the possibility that more than one species may have been confused under the name *Thenus orientalis*'. *Thenus indicus* has now been recognised as a distinct species (together with three new species) as part of our revisionary study of *Thenus* (Burton & Davie, in press). As previously grouped under the name '*Thenus orientalis*', these lobsters are of significant economic importance (see Holthuis, 1991 and Chan, 1998), and a substantial body of work exists covering general physiology, larval behaviour and development, behavioural studies, spermiogenesis, aquaculture and fisheries. It is thus important to fix unambiguously the identity of *Scyllarus orientalis* Lund, 1793 in order to prevent ongoing confusion.

2. In Opinion 519 (August 1958) the Commission placed on Official Lists the generic name *Thenus* Leach, 1815 and the specific name of *Scyllarus orientalis* Lund, 1793, then thought to be a senior subjective synonym of *Thenus indicus* Leach, 1815, the type species of *Thenus* by monotypy, and thus the valid name for the species. The typification of *S. orientalis* was not then considered.

3. The five species of *Thenus* that we have recognised (Burton & Davie, in press) are relatively cryptic and remarkably homogenous in appearance. We adopted a concordant approach to effectively separate the *Thenus* species, using starch gel isozyme electrophoresis, mitochondrial DNA sequencing, morphometrics and morphological comparisons. The morphometric and morphological comparisons rely heavily on leg and mouthpart characters to effectively discriminate species. The original description of *Scyllarus orientalis* Lund, 1793 does not provide sufficient information to distinguish it from its congeners. In addition there are problems concerning the positive identification of a type specimen and the very poor condition of the dry specimen labelled 'Type' in the Zoologisk Museum, Copenhagen (specimen no. ZMUC CRU7648) which lacks all legs and mouthparts.

4. Lund (1793) recorded the locality of *Scyllaris orientalis* as 'Fra Ostindien og China'. Holthuis (1991, p. 227) concisely summarised the difficulties regarding the type material of *S. orientalis*: 'Lund's material consisted of a specimen from Tranquebar, India, and one from China, so that both are syntypes; also a syntype is the specimen figured on pl. 2 fig. D in Rumphius' (1705) *Amboinsche Rariteitkamer*, this specimen not necessarily comes from Amboina, as the figure was made in Holland after a specimen of unknown locality and subsequently added to Rumphius' manuscript, it most likely originated from Indonesia. One of Lund's two specimens is in UZM, it is preserved in alcohol its condition is reasonable; the second specimen is lost. The third syntype specimen formed part of the collection of Henricus d'Acquet, burgomaster of Delft, The Netherlands, this collection was sold publicly in 1708 and the fate of the specimen of *Thenus* is unknown'.

5. The only surviving syntype specimen in the Zoologisk Museum, University of Copenhagen (ZMUC [= UZM]), is a dry specimen which is in very poor condition (i.e. not in spirit and not in 'reasonable condition' as stated by Holthuis, 1991; see para. 4 above). All the legs and mouthparts are missing (N. Bruce, in litt.) and it is impossible to attribute it reliably to any of the known *Thenus* species (Burton & Davie, in press). In addition, a relatively modern label states that it is a type but there is no original labelling that could be used to provide any clear proof that it was examined by Lund. As it is impossible to prove or disprove its type status, and as it is useless in its present state in helping to identify the true *T. orientalis*, the most appropriate action is to set it aside and erect a neotype.

6. Article 75.5 of the Code (Replacement of unidentifiable name-bearing type by a neotype) states: 'When an author considers that the taxonomic identity of a nominal species-group taxon cannot be determined from its existing name-bearing type (i.e. its name is a *nomen dubium*), and stability or universality are threatened thereby, the author may request the Commission to set aside under its plenary power the existing name-bearing type and designate a neotype'.

7. In view of this and the need to stabilise the usage of the name *Scyllarus orientalis* Lund, 1793, we propose that a neotype be selected to replace the existing putative syntype. The proposed neotype is a female specimen, 69.2 mm carapace length and 95.8 mm carapace width (at the level of the postorbital spines), collected from Padang, southern central coast of Sumatra, Indonesia, on 23 May 1997. It is deposited in the Zoological Reference Collection, National University of Singapore, under the catalogue number ZRC-1999.0481. Our choice of specimen for *S. orientalis* rests on the fact that there are two common *Thenus* species occurring sympatrically

between India and China (see para. 8 below) and two available names for them (*orientalis* and *indicus*). One of these species (*indicus*) is identifiable from existing type material and the most parsimonious course is to nominate a neotype which will allow the other to be identified as *T. orientalis*.

8. As noted by Holthuis (1991), the original syntypes were from three different localities over a considerable geographic range, Tranquebar (India), China and an unknown locality most likely to be Indonesia. The proposed neotype is from the Indian Ocean coast of Sumatra, Indonesia, and thus close to the centre of the geographic range defined by the original syntypes. *Thenus orientalis* as recognised by us (Davie & Burton, in press) is found from Okinawa, Vietnam, Philippines, Taiwan, Singapore, and across the Indian Ocean at least to the United Arab Emirates.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all previous fixations of type specimens for the nominal species *Scyllarus orientalis* Lund, 1793 and to designate as the neotype the specimen ZRC-1999.0481 deposited in the Zoological Reference Collection, National University of Singapore, described in para. 7 above;

(2) to delete from the entry on the Official List of Specific Names in Zoology for the name *orientalis* Lund, 1793, as published in the binomen *Scyllarus orientalis*, that it is the valid name (senior subjective synonym) for *Thenus indicus* Leach, 1815, the type species of *Thenus* Leach, 1815, and to add an endorsement that it is defined by the neotype designated in (1) above;

(3) to place on the Official List of Specific Names in Zoology the name *indicus* Leach, 1815, as published in the binomen *Thenus indicus* (specific name of the type species of *Thenus* Leach, 1815).

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Case 3090

Musca arcuata and *M. festiva* Linnaeus, 1758 (currently *Chrysotoxum arcuatum* and *C. festivum*) and *M. citrofasciata* De Geer, 1776 (currently *Xanthogramma citrofasciatum*) (Insecta, Diptera): proposed conservation of usage of the specific names by the designation of neotypes for *M. arcuata* and *M. festiva*

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Abstract. The purpose of this application is to conserve the long prevailing usage of the names of three hoverflies, *Chrysotoxum arcuatum* (Linnaeus, 1758), *Chrysotoxum festivum* (Linnaeus, 1758) and *Xanthogramma citrofasciatum* (De Geer, 1776). There has been confusion in the literature since 1982, when lectotypes (which may not have been syntypes) were designated for *C. arcuatum* and *C. festivum*. These designations had the effect of transferring the name *arcuatum* to *C. festivum* auct. and *festivum* to *X. citrofasciatum* auct.; the name *C. fasciatum* (Müller, 1764) was introduced for *C. arcuatum* auct. These changes have been followed by some but not all authors, and in accordance with Article 75.6 of the Code it is proposed that the long established usage of the names should be conserved by the designation of neotypes for *C. arcuatum* and *C. festivum*.

Keywords. Nomenclature; taxonomy; Diptera; SYRPHIDAE; hoverflies; *Chrysotoxum*; *Xanthogramma*; *Chrysotoxum arcuatum*; *Chrysotoxum fasciatum*; *Chrysotoxum festivum*; *Xanthogramma festivum*; *Xanthogramma citrofasciatum*.

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1. The subject of this application is the need to resolve confusion which has resulted from the transfer of specific names between well-known and widespread species in the much studied group known as hoverflies (Diptera, SYRPHIDAE). The species concerned are now placed in the genera *Chrysotoxum* Meigen, 1803 (type species *Musca bicincta* Linnaeus, 1758) and *Xanthogramma* Schiner, 1860 (type species *Syrphus ornatus* Meigen, 1822). Both genera comprise conspicuous brightly marked yellow and black wasp mimics and are superficially similar to each other. The most obvious difference is in the antennal structure: the antennae are longer than the head and black in colour in the *Chrysotoxum* species considered here, while they are shorter than the head and bright orange in the *Xanthogramma* species.

2. This case concerns three species, which have long been known as *Chrysotoxum arcuatum* (Linnaeus, 1758), *C. festivum* (Linnaeus, 1758) and *Xanthogramma*

citrofasciatum (De Geer, 1776). This stable nomenclature has become confused following a paper by Thompson, Vockeroth & Speight (1982). Following an examination of specimens in the Linnaeus collection at the Linnean Society of London, these authors designated lectotypes of *Musca arcuata* and *M. festiva*, nominal species established by Linnaeus (1758). These designations have the effect of transferring the specific name of *Chrysotoxum arcuatum* to *C. festivum* auct. and that of *C. festivum* to *Xanthogramma citrofasciatum* (so that '*festivum*' is transferred to another genus); *C. arcuatum* auct. was renamed *C. fasciatum* (Müller, 1764). These transfers cause much confusion in the names of the three species, and it is proposed that stability should be restored by the designations of neotypes for *M. arcuata* and *M. festiva* in the long-understood senses of those names.

3. Linnaeus (1758) described two species, *Musca arcuata* (p. 592) and *M. festiva* (p. 593) which have long been regarded as belonging to the genus *Chrysotoxum*. De Geer (1776, p. 118) described *M. citrofasciata*, which has consistently been placed in *Xanthogramma*. The identity of the Linnaean names has, however, been placed in doubt following the revision of the specimens in the Linnaeus collection in London by Thompson, Vockeroth & Speight (1982, pp. 151–2, 155–6). As they pointed out, the application of these names throughout the 20th century has followed the interpretation by Verrall (1901, pp. 450, 645, 650), who himself followed Haliday (1851, pp. 140–141) and subsequent 19th century authors. Thompson et al. listed some earlier authors from Fabricius (1775, pp. 767, 769) onwards, who differed in applying the name *arcuata* Linnaeus to *Chrysotoxum festivum* auct. and *festiva* Linnaeus to *Xanthogramma citrofasciatum* (De Geer, 1776). From a study of the Linnaeus collections they came to the same conclusions as these latter authors and designated lectotypes which resulted in the transfer of the names *arcuatum* and *festivum* to these species. They also applied the name *Musca fasciata* Müller (1764, p. 85) to *Chrysotoxum arcuatum* of authors, although without giving any justification for the use of this name.

4. The name *Musca arcuata* has been variously applied, but always in the genus *Chrysotoxum*. Verrall (1901, p. 647) indicated that it had in the past been erroneously applied to *C. cautum* (Harris, 1776), which is not recorded from Sweden, but that it correctly applied to a more northern species to which he assigned the name. On p. 651 he noted that *arcuatum* had also been associated with the species to which he applied the name *C. festivum*, probably because the latter has arched bows on the abdomen. The specimen which they designated lectotype of *Musca arcuata* Linnaeus was stated by Thompson et al. (1982, p. 155) to bear the Linnaean name label '*arcuata* 28' and to fit Linnaeus's description better than did *C. arcuatum* of authors, in having four yellow bands on the abdomen while *C. arcuatum* auct. has an additional broad apical band on each segment. This identification of *M. arcuata* may be historically correct but the resultant transfer of the specific name to *C. festivum* auct. has resulted in unnecessary confusion, compounded by the simultaneous change in application of the name *festivum*, whenever these names are encountered in the literature.

5. The application by Thompson et al. of the specific name of *Musca fasciata* Müller, 1764 (p. 85) to *C. arcuatum* of authors is also controversial. As no justification was evidently thought necessary, it was presumably selected as the next most senior supposed synonym. Peck (1988, p. 56) has listed seven available junior synonyms of *C. arcuatum* auct., but *fasciatum* was not included since this was listed

by her (p. 45) as a junior synonym of *Sphaerophoria scripta* (Linnaeus, 1758, p. 594). Type specimens of *Musca fasciata* are unlikely to exist as Müller's collection was destroyed in 1801 (see Thompson & Pont (1994, p. 36) and Evenhuis (1997, p. 555)). Use of Müller's name *fasciata* in *Chrysotoxum* cannot therefore be unequivocally supported or confirmed.

6. The lectotype of *Musca festiva* was stated by Thompson et al. (1982, p. 155) to bear the Linnaean label '*festiva* 33'; two other (unlabelled) specimens were considered probable syntypes. All three are males of *Xanthogramma citrofasciatum* (De Geer, 1776) as long understood. Thompson et al. listed some early authors who had identified *festiva* with *citrofasciata*, noting that the identification of *M. festiva* as a *Chrysotoxum* species by Haliday (1851, p. 141) stemmed from some other early authors from Scopoli (1763, p. 355) onwards. Apart from the specimens in the Linnean Society collections, the argument by Thompson et al. that *Musca festiva* Linnaeus applied to a *Xanthogramma* species was principally based on part of the Latin description of festiva, which reads 'antennae nigrae, capite longiores ...'; Thompson et al. translated this as 'antennae black, head longer ...'. They ignored the reference to colour, which should have cast strong doubt on the identification, but considered that the description indicated the species to have short antennae and thus not be a *Chrysotoxum* species. They also overlooked the accurate interpretation of the Latin by Verrall (1901, p. 647), who quoted it in support of *Musca festiva* being a *Chrysotoxum*. The word 'longiores' is plural and therefore qualifies antennae rather than head, and the word 'capite' is in the ablative case, meaning 'than the head'. Thus the phrase is correctly translated 'antennae black, longer than the head' as indicated by Iliff (1995, p. 9). Clearly, this description refers to a species with long black antennae such as those of *Chrysotoxum*, and not to *Xanthogramma*, which have short yellow antennae. This translation has been confirmed by a Latin scholar, Howard Don Cameron, with whom it has been queried by Dr F.C. Thompson. Verrall (1901, p. 647) also cited another part of Linnaeus's description of *M. festiva* in support of his identification of the name, i.e. 'abdomen arcubus quatuor flavis interruptis', referring to the presence of four interrupted yellow bands; this is a characteristic of the *Chrysotoxum* species while *Xanthogramma citrofasciatum* De Geer, 1776 has only three interrupted yellow bands on the abdomen.

7. It is the case that Linnaeus placed *M. festiva* in a group of species with short antennae, as indicated by Thompson et al., even though this is contrary to the true meaning of the description. It is well known that many Linnaean species are composites of more than one taxon, and it is possible that Linnaeus applied the name *festiva* to members of both genera, which look very similar in the absence of the head. Moreover, there is no evidence to confirm that the specimens now in the Linnean Society collection were among those on which the description of *M. festiva* was originally based. Elsewhere in their paper, Thompson et al. (1982) indicated instances where the evidence from Linnaeus's descriptions is in conflict with the labelling of specimens, and in those cases they gave priority to the written description. There is ample evidence, some of it mentioned by Thompson et al., that labelling in the Linnean collections cannot be relied on and that specimens were added or altered after 1757 both in Sweden and London (see Day & Fitton, 1978, p. 183, and Løken, Pekkarinen & Rasmont, 1994, p. 233). For example, *Microdon mutabilis* (Linnaeus, 1758) is clearly identifiable from Linnaeus's description but the specimen labelled

mutabilis is of *Sericomyia silentis* (Harris, 1776), a species of completely different appearance, while there is below this a specimen of *mutabilis* with the original head missing and a head of a *Helophilus* species glued in its place (which had been added subsequent to Haliday's examination of the collection in 1847–1848). Thompson et al. (1982, p. 157) selected this specimen, excluding the head, as the lectotype of *mutabilis*. While there is no certainty that specimens had been substituted for the original types of *Musca festiva*, this cannot be excluded in view of the differences in antennal length and coloration and in abdominal markings from Linnaeus's description.

8. The transfer of the specific name of *Musca festiva* to a *Xanthogramma* species is complicated by the identity of *Musca citrofasciata* De Geer (1776, p. 118), because of the citation by De Geer of *Musca festiva* Linnaeus as an apparent synonym of his new name. This was done, as with fourteen other cases of species described as new by De Geer in the same work, by repeating part of Linnaeus's diagnosis of *festiva* immediately after the short Latin description of his own species *citrofasciata*. In the case of *Musca citrofasciata* the diagnosis given for *festiva* is comparable, but not identically worded, to that of *citrofasciata*. According to Thompson & Pont (1994, p. 62) *citrofasciata* was proposed as a new substitute name for *festiva*. Thompson et al. (1982, p. 155) supported this conclusion by referring to De Geer's personal association with Linnaeus and his knowledge of Linnaeus's collections. However, De Geer did not state, as has been suggested, that the names applied to the same species and he did not give any reasons for mentioning *M. festiva* Linnaeus when discussing his species *M. citrofasciata*, but it was probably for purposes of comparison. We do not accept as valid the argument that the names *festiva* and *citrofasciata* must apply to the same species, because it is clear that De Geer was describing *M. citrofasciata* as a new biological species and not simply proposing a new name for *festiva* of Linnaeus. The brief Latin diagnoses given by De Geer do not mention the colour or length of the antennae under either name, but the more detailed French description of *M. citrofasciata* states 'antennes rousses, à palette courte arrondie avec un poil simple', thus eliminating, both on colour and length, the possibility that De Geer was dealing with a *Chrysotoxum* species. Thompson et al. (1982, p. 156) referred to the confusion among earlier authors about the application of the name *festiva*, noting that Illiger (1807, p. 450) first drew attention to this. Because Illiger supposed *citrofasciata* to have been a new name for *festiva*, which he believed to be a species with long antennae (i.e. a *Chrysotoxum*), he proposed the name *Musca philanthina* for the *Xanthogramma* species. If the view of Thompson & Pont (1994) were accepted, then *X. philanthinum* (Illiger) would be an available name for *X. citrofasciatum* auct. but we do not suggest its introduction.

9. De Geer (1776) cited Linnaean names following his own diagnoses of fifteen of the Diptera species described as new by him. In all these cases, Thompson & Pont (1994) regarded De Geer's name as synonymous with the Linnaean name. In some intances, e.g. *M. rosae* De Geer and *M. pyrastri* Linnaeus (see Chandler, 1998a, p. 97) this is evidently correct, but in other cases (e.g. two examples concerning species now in the TEPHRITIDAE, discussed in Chandler (1998b)) it is clearly not so. Many of De Geer's descriptions were based on specimens reared by him and there is no question that he intended his names for newly described species and not as replacement ones for Linnaean species. We therefore consider that the established position of the name

Musca citrofasciata De Geer as a *Xanthogramma* does not affect the generic assignment of the name *Musca festiva* Linnaeus.

10. Since Thompson et al. proposed changes in application of the Linnaean names *arcuata* and *festiva* there has been confusion in the literature. Authors who have accepted these changes are Torp (1984, 1994), Kormann (1988), Speight (1990, 1993), Speight & Lucas (1992), Daccordi (1995), Schmid (1995), Holinka & Mazánek (1997), Maibach, Goeldlin de Tiefenau & Dirickx (1998) and Ssymank et al. (1999). Recent authors who have maintained the long traditional usage of these names include Stubbs & Falk (1983), Dusek & Láska (1987), Peck (1988), Verlinden (1991), Soszynski (1991), Stubbs (1996) and Howarth et al. (2000), although it has to be accepted that the *Catalogue of Palaearctic Diptera* by Peck (1988) was complete only to the end of 1982 and the paper by Thompson et al. was not cited. The traditional usage of the names was also maintained in the British and Irish Check List (Chandler, 1998b), pending the present application. In recent works which mention only *C. arcuatum* it is often not possible to be certain what species is intended. In Britain there has been some particular confusion because Whiteley (1988, p. 46) followed the change in *Xanthogramma* but not in *Chrysotoxum*, and this has resulted in the use of the name *festivum* in both genera by the British Hoverfly Recording Scheme (Ball & Morris, 1992, pp. 16, 19).

11. In passing, it should be noted that the name *festiva* becomes *festivum* in combination with both *Xanthogramma* and *Chrysotoxum* as both generic names have neuter gender. *Xanthogramma* is based on the Greek neuter noun *gramma*, but has sometimes been treated as feminine in error. Thompson et al. (1982, p. 155) gave this correctly in their text, but their Abstract (p. 150) gave *X. festiva*, which was repeated by Whiteley (1988, p. 46).

12. While it is possible (see para. 4 above) that the name *Musca arcuata* Linnaeus, 1758 may have originally referred (at least in part) to *Chrysotoxum festivum* of Verrall (1901, p. 650) and most subsequent authors, the transfer of the name to this species by Thompson et al. (1982) is not considered justified because of the confusion that has resulted, and which continues. It is also considered unnecessary because of the conclusion reached by Iliff (1995, p. 9), and discussed above, that *Musca festiva* Linnaeus, 1758 was indeed a *Chrysotoxum* species and not a *Xanthogramma* as supposed by Thompson et al. We therefore urge the maintenance of *C. festivum* in its traditional sense, and also that of *Xanthogramma citrofasciatum*. The name *Musca fasciata* Müller, 1764 is not considered to be unequivocally identified with *Chrysotoxum arcuatum* auct. (see para. 5 above), and we believe it most desirable to maintain the name *arcuatum* in the sense used by Verrall (1901) and most subsequent authors.

13. We propose, in accordance with Article 75.6 of the Code, that the extensive confusion caused by the transfer of names between species, as described in para. 2 above, should be avoided by the designation of neotypes for *Musca arcuata* and *M. festiva* Linnaeus, 1758 which accord with the usage of those names which has prevailed for a century or more. This will also conserve the usage of *Xanthogramma citrofasciatum* (De Geer, 1776). As outlined above, we do not believe it certain that the lectotypes designated by Thompson, Vockeroth & Speight (1982) were demonstrably syntypes, and even if they were their adoption is the cause of the confusion. We note that exactly similar considerations led the Commission to designate

neotypes, in accordance with the prevailing usage of names, for the Linnaean bumblebee species *Bombus muscorum* and *B. terrestris* (Opinion 1828, *BZN* **53**: 64–65, March 1996). As the neotype of *M. arcuata* we propose a male specimen from Voss (S.W. Norway) collected by A.E. Stubbs (30.vii 2.viii. 1977), and for that of *M. festiva* we propose a male specimen (B.M 1937 539) from Schneverdingen (Lüneberg Heath, N. Germany) collected by T.H. Rowsell and B.J. Clifton (5.vii.1937); both are in The Natural History Museum, London, and have been marked 'NEOTYPE, det. P.J. Chandler, 31.3.2000'.

14. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to suppress all previous type fixations for the nominal species *Musca arcuata* Linnaeus, 1758 and *Musca festiva* Linnaeus, 1758, and to designate as the respective neotypes the specimens mentioned in para. 13 above;

(2) to place the following names on the Official List of Specific Names in Zoology:
(a) *arcuata* Linnaeus, 1758 as published in the binomen *Musca arcuata* and as defined by the neotype designated in (1) above;
(b) *festiva* Linnaeus, 1758 as published in the binomen *Musca festiva* and as defined by the neotype designated in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3103

Orsodacne Latreille, 1802 (Insecta, Coleoptera): proposed conservation by the designation of *Chrysomela cerasi* Linnaeus, 1758 as the type species

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Abstract. The purpose of this application is to conserve the long understanding and usage of the generic name *Orsodacne* Latreille, 1802 for a holarctic group of leaf beetles (family CHRYSOMELIDAE). The genus was originally based on a single species of uncertain identity but in 1810 Latreille himself designated *Chrysomela cerasi* Linnaeus, 1758 as the type. This species has been treated as the type since that date. Species of *Orsodacne* are pests on cultivated plants.

Keywords. Nomenclature; taxonomy; Coleoptera; CHRYSOMELIDAE; *Orsodacne*; *Lema*; *Orsodacne cerasi*; leaf beetles; plant pests.

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1. The genus *Orsodacne* was introduced by Latreille (1802, p. 223) with the single included species '*Lema ruficollis* Fabricius'. In 1787 Fabricius (p. 88) had described a species *Crioceris ruficollis* from 'Cajennae'; this was subsequently placed in his new genus *Lema* by Fabricius (1798, p. 91) and is still currently known as *Lema ruficollis*. However, Latreille did not indicate that his new genus was South American.

2. Later Latreille (1804, p. 349) gave a more complete description of *Orsodacne*, mentioning the same distinguishing characters. He included in the genus two species from France, called *Orsodacna* (sic) *chlorotica* (i.e. *Crioceris chlorotica* Olivier, 1791) and *Orsodacna* (sic) *humeralis* Latreille, 1804. These two nominal species have been included in *Orsodacne* since 1804 (see, for example, Clavareau, 1913), the former listed as a synonym of *O. cerasi* (Linnaeus, 1758), the latter as a synonym of *O. lineola* (Panzer, 1795), which is a junior primary homonym that must be replaced by Latreille's name *humeralis*. Latreille (1804) also gave as a synonym of *O. chlorotica* the name *Crioceris fulvicollis* Fabricius, 1792 (p. 5), which has subsequently been listed in the synonymy of *O. cerasi*. The question arises whether *fulvicollis* was the species that Latreille had meant two years earlier when he mentioned '*ruficollis*'.

3. Still later, in a work that has been considered to contain the first designations of type species for insect genera, Latreille himself (1810, p. 431) designated the European species '*Crioceris cerasi* Fab.' (i.e. *Chrysomela cerasi* Linnaeus, 1758, p. 376) as the type of *Orsodacne*. This species has consistently been treated as the type of the genus.

4. Under the Code *Crioceris ruficollis* (now *Lema ruficollis*) is the type species of *Orsodacne* by original monotypy. Yet since 1804 a different use of *Orsodacne* has been stable, as shown by the following recently-published representative works in which the name has appeared: Lindroth (Ed., 1960), Arnett (1960–1962), Gressitt &

Kimoto (1961), Gurjeva & Kryzhanovskij (Eds., 1965), Brakman (1966), Mann & Crowson (1981), Seeno & Wilcox (1982), Gruev & Tomov (1984), Lucht (1987), Suzuki (1988), Medvedev & Dubeshko (1992), Jolivet & Hawkeswood (1995), Hansen (1996) and Pileckis & Monsevicius (1997). The genus *Orsodacne* is not large, but some of the species have been reported as damaging cultivated plants, and furthermore the genus is the base of the family-group name ORSODACNIDAE Thomson, 1859 (p. 154). Generally this taxon has been treated as a subfamily within CHRYSOMELIDAE; Böving & Craighead (1931, p. 63) elevated it to full family rank and this has lately been followed by Lawrence & Newton (1995).

5. Recognition of *Crioceris ruficollis* Fabricius, 1787, which has been placed in *Lema* since Fabricius's (1798) description of the genus, as the type species of *Orsodacne* Latreille, 1802 would render the name *Orsodacne* a junior subjective synonym of *Lema*. A new name would be needed for *Orsodacne* as currently understood, a change that would cause considerable confusion. The name *Lema* Fabricius, 1798 relates to a large worldwide genus of leaf beetles (family CHRYSOMELIDAE, subfamily CRIOCERINAE) with many pests on several important cultivated plants; the type of the genus is the European *Chrysomela cyanella* Linnaeus, 1758, of which *L. puncticollis* (Curtis, 1830) is a junior synonym. I propose that *Chrysomela cerasi* Linnaeus, 1758 be designated as the type species of *Orsodacne* Latreille, 1802, in accord with Latreille's own (1810) designation.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all previous fixations of type species for the nominal genus *Orsodacne* Latreille, 1802 and to designate *Chrysomela cerasi* Linnaeus, 1758 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Orsodacne* Latreille, 1802 (gender: feminine), type species by designation under the plenary power in (1) above *Chrysomela cerasi* Linnaeus, 1758;

(3) to place on the Official List of Specific Names in Zoology the name *cerasi* Linnaeus, 1758, as published in the binomen *Chrysomela cerasi* (specific name of the type species of *Orsodacne* Latreille, 1802).

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Case 3118

Anthaxia Eschscholtz, 1829 (Insecta, Coleoptera): proposed designation of *Buprestis nitida* Rossi, 1792 (currently *A. fulgurans* (Schrank, 1789)) as the type species

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Abstract. The purpose of this application is to maintain the long accepted usage of the name *Anthaxia* Eschscholtz, 1829 for one of the largest genera in the BUPRESTIDAE by designating the originally included species *Buprestis nitida* Rossi, 1792 (a junior subjective synonym of *B. fulgurans* Schrank, 1789) as the type species. The earliest designations were of other species, but acceptance of these would cause confusion in buprestid nomenclature.

Keywords. Nomenclature; taxonomy; Coleoptera; BUPRESTIDAE; *Anthaxia*; *Anthaxia fulgurans*; *Buprestis nitida*.

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1. The buprestid genus *Anthaxia* Eschscholtz, 1829 (p. 9) currently includes about 800 species but originally contained only four nominal species; these were cited (without mention of any authorship) as *Buprestis cyanicornis*, *B. manca*, *B. nitida* and *B. quadripunctata*. In addition to mentioning these names Eschscholtz gave a very brief description of the genus.

2. Several authors have (validly or otherwise) designated type species of *Anthaxia*:

(1) Westwood (1840, p. 24) mentioned that the genus contained four species and gave '*B. nitidula* Linn.' (*B. nitidula* Linnaeus, 1758, p. 410) as the type; he referred to pl. 31 of Curtis (1824) which illustrates *B. nitidula*. Perhaps Westwood believed that Eschscholtz had meant *B. nitidula* rather than *B. 'nitida'*, but since this nominal species had not been included by Eschscholtz the designation is invalid.

(2) Duponchel (p. 582 in d'Orbigny, 1842) said of *Anthaxia* 'Nous n'en citerons que quelques unes: 1. l'*A. manca*, *Buprestis* id. Fabricius, qui peut être considerée le type du g., ...'. This is a valid designation of *B. manca* Linnaeus, 1767 (p. 1067) as the type species.

(3) Thomson (1859, p. 100) gave '*4-punctata* (Lin.)' as the type species; were it not for Duponchel's earlier designation of *B. manca* this would have fixed *B. quadripunctata* Linnaeus, 1758 (p. 410) as the type.

(4) Desmarest (p. 40 in Chenu, 1860) cited *B. manca* as the type, in agreement with Duponchel's earlier designation.

(5) Richter (1949, p. 45) gave *B. fulgurans* Schrank, 1789 (p. 85) as the type species; although this was not an originally included nominal species (see para. 1 above) its name is a senior subjective synonym of *B. nitida* Rossi, 1792 (p. 63) (see Kerremans, 1892, p. 121). However, because Richter did not mention the synonymy, under

Article 69.2.2 of the Code his statement does not constitute a fixation of *B. nitida* as the type species.

3. If either of the first designations of originally included nominal species (those by Duponchel of *B. manca* and by Thomson of *B. quadripunctata*) were to be followed there would be much confusion in the taxonomy and nomenclature of *Anthaxia*, which is one of the largest genera in the BUPRESTIDAE. *B. manca* was designated by Richter (1949, p. 181) as the type species of his subgenus *Anthaxia* (*Trichocratomerus*); although this subgeneric name had been published earlier (Richter, 1944, p. 126) it takes availability only from 1949 when the type species was designated (Article 13.3 of the Code). *Anthaxia quadripunctata* (Linnaeus, 1758) is extremely close to (and is often treated as a senior synonym of) *A. godeti* Gory & Laporte, 1839, which is the type species of *Anthaxia* (*Melanthaxia*) Richter; as with *Trichocrateromus*, *Melanthaxia* was published by Richter in 1944 (p. 129) but became available only when the type species was designated (Richter, 1949, p. 102). The subgenus *Melanthaxia* contains about 100 species and is one of the best defined groups or subgenera in the modern concept of *Anthaxia* (see Schaefer, 1936, 1937, 1949; Richter, 1944, 1949; Cobos, 1956, 1958, 1986; Obenberger, 1930, 1958; Bílý, 1982, 1997; Holynski, 1989; Nelson, 1985), and if Thomson's designation of *B. quadripunctata* were adopted all these would have to be shifted to *Anthaxia* s. str. and those (about 300 species) at present in *Anthaxia* s. str. (treated as typified by *B. nitida* Rossi) would have to be given a new subgeneric name.

4. Because *Anthaxia* has for many years been treated as typified by *B. nitida*, a nominal species originally included by Eschscholtz, I propose that stability would be served by designation of this as the type species. As already mentioned, since Kerremans (1892, p. 121) *B. nitida* has been treated as a junior subjective synonym of *B. fulgurans* Schrank, 1789 (p. 85), now known as *A. fulgurans*.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all previous fixations of type species for the nominal genus *Anthaxia* Eschscholtz, 1829 and to designate *Buprestis nitida* Rossi, 1792 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Anthaxia* Eschscholtz, 1829 (gender: feminine), type species by designation in (1) above *Buprestis nitida* Rossi, 1792 (a junior subjective synonym of *Buprestis fulgurans* Schrank, 1789);

(3) to place on the Official List of Specific Names in Zoology the name *fulgurans* Schrank, 1789, as published in the binomen *Buprestis fulgurans* (senior subjective synonym of the specific name of *Buprestis nitida* Rossi, 1792, the type species of *Anthaxia* Eschscholtz, 1829 as ruled in (1) above).

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Case 3085

Lacerta undata A. Smith, 1838 (currently *Pedioplanis undata*; Reptilia, Sauria): proposed conservation of the specific name by the designation of a neotype

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Abstract. The purpose of this application is to conserve usage of the name *Pedioplanis undata* (A. Smith, 1838) for the 'western sand lizard' of southern Africa. The recently rediscovered syntypes are specimens of *P. lineoocellata pulchella* Gray, 1845 and not of *P. undata* auct., but acceptance of this typification would result in very considerable confusion. The name *P. undata* would be transferred to *P. l. pulchella* auct., the taxon known as *P. u. undata* would have to have a new name as a subspecies of *P. inornata* Roux, 1907, and there would be other changes of accepted names. It is proposed that these consequences should be avoided by the designation of a neotype for *Lacerta undata* A. Smith, 1838.

Keywords. Nomenclature; taxonomy; Reptilia; Sauria; LACERTIDAE; western sand lizard; spotted sand lizard; *Pedioplanis undata*; *Pedioplanis lineoocellata pulchella*; Namibia; South Africa.

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1. The specific name of *Pedioplanis undata* (A. Smith, 1838, p. 93) from the 'northern and western parts of Cape Colony' has been widely and constantly in use for the 'waved *Eremias*' (Gray, 1845, p. 43) or 'western sand lizard' (e.g. Branch, 1988, p. 164). Roux (1907, p. 427) described *Eremias inornata* from the same region. This lizard differs from *P. undata* auct. in colour pattern and was regarded as a 'variety' by Boulenger (1910); Mertens (1971) compared it with the '*olivacea*' form of certain *Podarcis* species. In the course of a revision of the *Pedioplanis undata* complex, Mayer & Berger-Dell'mour (1987) were able to demonstrate that *undata* (auct.) and *inornata* are geographical subspecies, *undata* being the northern one and *inornata* the southern. However, the type locality of *Lacerta undata* cited by Smith (1838) lies some 400 km south of the boundary of the taxon (as subsequently understood) and is within the *inornata* distribution area.

2. Boulenger (1921, pp. 283–289) noted that the descriptions of *Lacerta undata* by Smith (1849) and by Duméril & Bibron (1839) (who had borrowed specimens from Smith), and particularly the drawings accompanying the type description by Smith (1849), did not correspond to *Eremias undata* auct. but to the subspecies

of *E. lineoocellata* Duméril & Bibron, 1839 (p. 314) which was named as *E. l. pulchella* by Gray (1845, p. 42). Boulenger further noted that '*E. undata* is not among the specimens presented by Smith to the British Museum, but the lizard received from Lord Derby, previous to 1845, is probably one of the original types, given away by the former before the publication of his Illustrations'. This last specimen had been briefly described by Gray (1845, p. 42); it is actually a *Pedioplanis undata* (auct.), but was not among the specimens on which Smith's original description of *L. undata* was based (see FitzSimons, 1943, pp. 335–338).

3. A careful comparison of the short original description of *Lacerta undata* and the accompanying drawings with both *P. undata* auct. and *P. lineoocellata pulchella* demonstrates clearly that they refer to *pulchella* and not to *undata* as subsequently understood. The original specimens of *L. undata* were untraced for many decades, but recently one of the authors of this application (W.B.) was able to find the syntypes in the National Museums of Scotland in Edinburgh (W. Böhme & W. Mayer, in preparation); these are specimens of *P. lineoocellata pulchella* Gray, 1845 and not of *P. undata* auct., and this explains the type locality given by Smith (see para. 1 above). Application of the Principles of Priority and of Typification (Article 61 of the Code) would result in *P. lineoocellata pulchella* (Gray, 1845) becoming *P. undata undata* (Smith, 1838); *P. undata inornata* would become *P. inornata inornata*, and *P. lineoocellata lineoocellata* would become *P. undata lineoocellata*. The taxon always called *P. u. undata* would have to be named as a new subspecies of *P. inornata*. These changes would clearly not be in the interest of stability; a well-known form would have to be named anew, and several names, widely used for many decades, would be transferred to other taxa. Moreover, some of the lizards in question (*P. undata* auct. and *P. lineoocellata pulchella*) occur in broad sympatry and even syntopy, so that after an exchange of their names virtually nobody would know which biological entity was meant.

4. In view of the doubt connected with the 'Lord Derby specimen' described by Gray (1845; see para. 2 above), with the erroneous origin of 'S. Africa', and tentatively (but wrongly) regarded as the type of *Lacerta undata* Smith by Boulenger (1921), we think that stability would best be served by designating a neotype for *L. undata* that is consistent with modern usage. We therefore propose that a specimen registered as NMW (Naturhistorisches Museum Wien) 31886 should be designated the neotype. The specimen is an adult male measuring 179 mm in length (snout-vent 52 mm, tail 127 mm, collected at 22° 37′S, 17° 03′E near Windhoek, Namibia, by H. Berger-Dell'mour on 25 October 1987). It has 34 gular scales, 10 collar scales, 12 longitudinal ventral rows, 66 dorsal scale rows at midbody, 28 subdigital lamellae under the fourth toe, 14 femoral pores, and five supralabials; tympanic shield present, lower eyelid with two large transparent scales and three smaller ones below it; there are five dark brown longitudinal bands on the back, the median one being forked on the neck and enclosing a thin, light stripe; flank with pale (yellow in life) spots at the lower margin of the outer lateral dark band.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all previous type fixations for the nominal species *Lacerta undata* A. Smith, 1838 and to designate the specimen NMW 31886, for which the data are given in para. 4 above, as the neotype;

(2) to place on the Official List of Specific Names in Zoology the name *undata* A. Smith, 1838, as published in the binomen *Lacerta undata* and as defined by the neotype designated in (1) above.

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Case 2980

Procoptodon Owen, 1874 (Mammalia, Marsupialia) and the specific names of *P. rapha* Owen, 1874 and *P. pusio* Owen, 1874: proposed conservation

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Abstract. The purpose of this application is to conserve the widely used names *Procoptodon rapha* Owen, 1874 and *P. pusio* Owen, 1874 for Pleistocene short-faced kangaroos (MACROPODIDAE: STHENURINAE) from Australia. Two senior synonyms, *P. scottii* (Krefft, 1870) and *P. thomsonii* (Krefft, 1870) have been used only once since 1899. Two subjective synonyms of *Procoptodon* Owen, 1874, *Halmaturotherium* and *Halmatutherium*, were published by Krefft in 1872 and 1873 respectively, but neither included nominal species or has been used. The suppression is proposed of these slightly older (but disused) generic synonyms and (virtually unused) specific synonyms of *Procoptodon*, *P. rapha* and *P. pusio*.

Keywords. Nomenclature; taxonomy; Marsupialia; MACROPODIDAE; *Procoptodon*; *Procoptodon rapha*; *Procoptodon pusio*; *Halmaturotherium*; *Halmatutherium*; kangaroos; Pleistocene; Australia.

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1. The generic name *Procoptodon* Owen, 1874 (p. 786) has been used consistently for the fossil short-faced kangaroos since its introduction. Owen had earlier (in Waterhouse, 1846, p. 59) established the nominal species *Macropus goliah* for a species of large extinct kangaroo (see para. 5 below), and he established *Procoptodon* following his recognition that two additional species (*P. pusio* and *P. rapha*) were congeneric with *goliah* and distinct from *Macropus*. *M. goliah* is the type species of *Procoptodon* by original designation (Owen, 1874, p. 792).

2. Two years before Owen established *Procoptodon*, Krefft (1872) proposed the generic name *Halmaturotherium* for 'those species of the kangaroo tribe, which, though of much larger size, still resemble in their dentition the ... wallabies of the present day' and 'which have rather firm jaws'. He did not include any nominal species in the genus.

3. The following year Krefft (1873) again discussed 'a tribe of kangaroos ... which resembled the wombats in the shortness of their firmly-jointed mandibles', but this time he used the slightly different name *Halmatutherium*. From the diagnosis it is clear that the spelling *Halmatutherium* was used by Krefft instead of his earlier *Halmaturotherium*, and since he consistently used *Halmatutherium* in later work (e.g. Krefft, 1874, p. 146) it was evidently an intentional change, i.e. an unjustified emendation (see Mahoney & Ride, 1975, p. 116).

4. No nominal species were included in *Halmatutherium* by Krefft in any published work. However, it is clear from a manuscript now in the Mitchell Library in Sydney (see Mahoney & Ride, 1975, pp. 116–117) that Krefft had intended his genus to

include two species which he had earlier (Krefft, 1870) named *Halmaturus*(?) *scottii* and *Halmaturus*(?) *thompsonii* (see para. 7 below). Dawson & Flannery (1985, p. 474) showed that according to Krefft's intention *Halmaturotherium* and *Halmatutherium* are senior subjective synonyms of *Procoptodon*. Neither Mahoney & Ride (1975) nor Dawson & Flannery (1985) formally included *Halmaturus scottii* or *H. thomsonii* in *Halmaturotherium* or *Halmatutherium*, and these two generic names remain available for nominal genera without included species.

5. In contrast to Krefft's generic names, the name *Procoptodon* Owen, 1874 has been very widely used since its establishment and the genus includes the largest known macropodids. Examples of works that indicate the prevailing usage are Stirton & Marcus (1966, pp. 349–359), Bartholomai (1970, pp. 213–233), Marcus (1976, pp. 94–105), Archer (1978, pp. 78–82), Sanson, Riley & Williams (1980, pp. 39–40), Wells, Moriarty & Williams (1984, p. 326), Dawson (1985, p. 66), Carroll (1988, p. 629), Ride, Taylor, Walker & Davis (1989, p. 95), Flannery (1991, pp. 46–47; 1994, pp. 119, 123), Murray (1991, p. 1114), Molnar & Kurtz (1997, in lists pp. 111–125) and Van Huet (1999, p. 338). An extended bibliography of *Procoptodon* (85 publications) is deposited with the Commission Secretariat.

6. Since neither *Halmaturotherium* nor *Halmatutherium* has been used as valid since 1899 and the prevailing usage of *Procoptodon* (para. 5 above) meets the requirements of Article 23.9.1.2 of the Code, it would be possible for us to invoke Article 23.9 and so fix the precedence of *Procoptodon* over *Halmaturotherium* and *Halmatutherium*. However, since we are seeking the suppression of Krefft's specific names in order to conserve *Procoptodon rapha* and *P. pusio* (para. 10 below), which are not protected by that Article, we consider it appropriate (see Recommendation 23A) to ask the Commission also to suppress the two earlier generic Krefftian synonyms of *Procoptodon*.

7. Krefft (1870, p. 9) established the names *Halmaturus*(?) *scottii* and *Halmaturus*(?) *thomsonii* for two species of fossil short-faced kangaroos thought to be from New South Wales; the tentative original combination of the specific names with *Halmaturus* Illiger, 1811 does not affect their availability (Article 11.9.3.4). He used the names *Halmaturus scottii* and *H. thomsonii* only once subsequently (Krefft, 1871a) although, as mentioned in para. 4 above, he intended to place these species in *Halmatutherium*. Simpson (1930, p. 73), not being aware that the specific names had been established in 1870, listed both as nomina nuda since neither species was separately described in Krefft (1871a) (in doing this Simpson mistakenly attributed the two names to Krefft's *Mammals of Australia* (1871b), but neither name appears in that work).

8. Owen (1874) established *Procoptodon rapha* (p. 788) and *P. pusio* (p. 788) for two species of short-faced kangaroos from the Pleistocene of Queensland (Darling Downs) and discussed them in detail. Except for the usages referred to in para. 9 below, the names *P. rapha* and *P. pusio* have been used consistently for the species ever since; relatively recent examples are Stirton & Marcus (1966, pp. 349–359), Bartholomai (1970, pp. 213–233), Marcus (1976, pp. 74–105), Archer (1978, pp. 79–82), Archer & Clayton (1984, p. 551), Dawson (1985, p. 66), Ride, Taylor, Walker & Davis (1989, p. 95); Flannery (1989, p. 30; 1991, pp. 46–47), Murray (1991, p. 1114), Molnar & Kurtz (1997, in lists pp. 111–125) and Van Huet (1999, p. 338).

9. Dawson (1982, unpublished Ph.D. thesis, University of New South Wales) in a study of the fauna of Wellington Caves (New South Wales) found no difference in

morphology and measurements between the type specimen (BMNH 32885, in The Natural History Museum, London) of *Procoptodon rapha* from Darling Downs and the larger of the two Wellington Caves species of short-faced kangaroo (including the type specimen of *Halmaturus scottii*). She also found no significant difference between the type specimen (AM F30330, in the Australian Museum, Sydney) of *Halmaturus thomsonii* [which was probably from the Darling Downs and not from Wellington Caves as Krefft thought: see Dawson, 1982, pp. 22, 128 and Mahoney & Ride, 1975, p. 145] and a single specimen of that species known from Wellington Caves. She made comparisons with descriptions by Bartholomai (1970) and Stirton & Marcus (1966) of *Procoptodon rapha* and *P. pusio* from large samples from the Darling Downs and concluded that *P. rapha* and *P. pusio* are junior synonyms of *Halmaturus scottii* and *H. thomsonii* respectively. The conclusion was distributed on microfilm (but not published in the meaning of the Code, Article 8.5.2) some years later (Dawson, 1994).

10. Following Dawson's unpublished conclusion, Dawson & Flannery (1985) used the names *Procoptodon scottii* and *P. thompsonii* Krefft, 1870 for the species previously known as *P. rapha* and *P. pusio* Owen, 1874. However, since their single published mention of the combinations *P. scottii* and *P. thompsonii*, Dawson and Flannery have reverted to using *P. rapha* and *P. pusio* to maintain prevailing usage (see Dawson, 1985, p. 66; Flannery, 1989, p. 30; Flannery, 1991, p. 46). Because of the single use by Dawson & Flannery (1985) the specific names of *Halmaturus scottii* and *H. thomsonii* are not unused names (nomina oblita) in the sense of Article 23.9 of the Code, but no benefit would result, and instability and confusion would be caused, if *P. scottii* and *P. thomsonii* were to be used instead of *P. rapha* and *P. pusio*. We therefore propose that *P. rapha* and *P. pusio* should be conserved by the suppression of Krefft's slightly earlier but virtually unused synonyms.

11. This application is supported by Drs L. Dawson and T.F. Flannery (who are, as mentioned above, the only authors who have applied the specific names which we seek to suppress), and also by Drs A. Bartholomai and G. Prideaux.

12. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to suppress the following names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) the generic names:
      (i) *Halmaturotherium* Krefft, 1872;
      (ii) *Halmatutherium* Krefft, 1873;
   (b) the specific names:
      (i) *scottii* Krefft, 1870, as published in the binomen *Halmaturus scottii*;
      (ii) *thomsonii* Krefft, 1870, as published in the binomen *Halmaturus thomsonii*;

(2) to place on the Official List of Generic Names in Zoology the name *Procoptodon* Owen, 1874 (gender: masculine), type species by original designation *Macropus goliah* Owen in Waterhouse, 1846;

(3) to place on the Official List of Specific names in Zoology the following names:
   (a) *goliah* Owen in Waterhouse, 1846, as published in the binomen *Macropus goliah* (specific name of the type species of *Procoptodon* Owen, 1874);

(b) *rapha* Owen, 1874, as published in the binomen *Procoptodon rapha*;
(c) *pusio* Owen, 1874, as published in the binomen *Procoptodon pusio*;

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
(a) *Halmaturotherium* Krefft, 1872, as suppressed in (1)(a)(i) above;
(b) *Halmatutherium* Krefft, 1873, as suppressed in (1)(a)(ii) above;

(5) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
(a) *scottii* Krefft, 1870, as published in the binomen *Halmaturus scottii* and as suppressed in (1)(b)(i) above;
(b) *thomsonii* Krefft, 1870, as published in the binomen *Halmaturus thomsonii* and as suppressed in (1)(b)(ii) above.

Acknowledgements

The following are thanked for their support and comments: Dr L. Dawson, School of Earth Sciences, Macquarie University; Dr T.F. Flannery, South Australian Museum, Adelaide; Dr A. Bartholomai, Queensland Museum, Brisbane; and Dr G. Prideaux, University of California, Riverside.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Comments on the proposed adoption of Berestneff, 1904 as the author of *Leucocytozoon* (Protista, Haemosporida) and of *Leukocytozoen danilewskyi* Ziemann, 1898 as the type species
(Case 3089; see BZN **56**: 168–170; **57**: 39–42)

(1) John R. Baker
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As former editor of the *Transactions of the Royal Society of Tropical Medicine and Hygiene*, I am writing to support the application by Dr Gediminas Valkiūnas to conserve the nominal genus *Leucocytozoon* Berestneff, 1904 with *L. danilewskyi* (Ziemann, 1898) as the type species. This action will resolve a problem that has long beset researchers in this field as well as editors of relevant journals.

(2) M.A. Peirce
Corresponding Associate, International Reference Centre for Avian Haematozoa, 16 Westmorland Close, Woosehill, Wokingham, Berkshire RG41 3AZ, U.K.

I offered a fairly detailed response to this issue (BZN **57**: 39–41), but there is one point which perhaps requires further comment. Valkiūnas and also Tatjana Iezhova (BZN **57**: 41–42) place some emphasis on Bennett having changed his mind regarding the validity of *L. danilewskyi* subsequent to the taxonomic review paper by Bennett et al. (1975), because this species and not *L. ziemanni* (Laveran, 1902) appeared in the 1982 publication by Bennett et al. Iezhova also points out that 10 years later in Bishop & Bennett (1992) *L. ziemanni* is given as the valid name for the parasite of Strigiformes in line with the 1975 review paper and that *L. danilewskyi* is mentioned as an invalid synonym.

In point of fact, Bennett did not change his mind regarding the validity of *L. ziemanni* as the type species. Both the 1982 and 1992 publications are host-parasite checklists published internally by the university in which the International Reference Centre for Avian Haematozoa (IRCAH) was then located. Both checklists were printed from the computer data base which had been updated by numerous individuals and which contained numerous errors and omissions. The appearance of *L. danilewskyi* in the 1982 edition as the valid name was an oversight which was corrected in the 1992 edition. Neither Bennett nor the IRCAH had changed their opinion since the key review paper of 1975.

Iezhova attached some significance to the usage of *L. danilewskyi* by several Russian authors, but this should be viewed with caution as some workers fail to follow the basic rules of the Code. My use of *L. danilewskyi* and not *L. ziemanni* in a conference paper (Peirce, 1981) was in error since I was working in Zambia at the time and did not have my reprint collection available.

(3) Gediminas Valkiūnas
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Dr Peirce in his comment (above) explains that some of the apparent inconsistencies by Bennett (1982) and by himself (1981) in the name of the type species of *Leucocytozoon* are based on errors. This perhaps emphasises the importance of the Commission making a ruling on this matter so that the authorship of the nominal genus and the name of its type species can be definitively resolved.

I have already spelt out the argument for attributing the authorship of *Leucocytozoon* to Berestneff (1904) with *L. danilewskyi* (Ziemann, 1898) as its type species. Peirce is not correct in his belief (BZN **57**: 41, para. 8) that 'most authors have used *L. ziemanni* as the type species of *Leucocytozoon*'. A number of authors (non-Russian as well as Russian) have used *L. danilewskyi* as an available name and as the type species. Some of these papers were listed in my original application and in Iezhova's comment; others include Dilko (1977), Yakunin & Zhazyltaev (1977), Nandi & Mandal (1978) and Nandi (1984).

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Comment on the proposed conservation of *Trichia* Hartmann, 1840 (Mollusca, Gastropoda), and the proposed emendation of spelling of TRICHIINAE Lozek, 1956 (Mollusca) to TRICHIAINAE, so removing the homonymy with TRICHIIDAE Fleming, 1821 (Insecta, Coleoptera)

(Case 2926; see BZN **57**: 17–23)

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The case covers three homonymous generic names: *Trichia* Hoffman, 1790 (for Myxomycetes), *Trichia* De Haan, 1839 (for decapod Crustacea) and *Trichia* Hartmann, 1840 (for gastropod Mollusca).

The oldest of the names, *Trichia* Hoffman, 1790, is that of a very well-known genus of Myxomycetes (slime fungi or slime moulds) for which it is considerably and unambiguously used; it is the type of the suprageneric names TRICHIINAE, TRICHIIDAE (or Trichiaceae) and Trichiacea. The name refers to a genus included in an ambiregnal group of organisms claimed by both mycologists and protozoologists and is thus covered by the Zoological Code as well as the Botanical one. *Trichia* was first published as a botanical name by van Haller (1768); it is available from Hoffman (1790), whose binominal work was the first to meet the zoological provisions for availability, under Article 10.5 of the Code.

Hartmann's (1840) name *Trichia* in Mollusca is not only a junior homonym of two older names (*Trichia* Hoffman, 1790 and *Trichia* De Haan, 1839), it is also a junior synonym of the name *Trochulus* Alten, 1812 (para. 5 of the application). The conservation of *Trichia* Hartmann and the family-group name TRICHIINAE Lozek, 1956 requires (a) the setting aside of the homonymy with the myxomycetan name; (b) the suppression of *Trichia* Da Haan, 1839; (c) the suppression of *Trochulus* Alten, 1812; (d) the rejection of the family-group name TROCHULINAE Lindholm, 1927, which is much older than TRICHIINAE Lozek; and (e) a change of spelling of TRICHIINAE Lozek under the plenary power to remove the homonymy between it and the family-group name TRICHIIDAE Fleming, 1821 in Coleoptera.

All this becomes unnecessary when the Code is followed. The only changes then would be *Trichia* Hartmann, 1840 substituted by *Trochulus* Alten, 1812, and the family-group name TRICHIINAE Lozek, 1956 substituted by TROCHULINAE Lindholm, 1927.

The question is, is all the trouble to conserve *Trichia* Hartmann, 1840 justified? So far as I know the genus is not of any importance in medicine or applied science and is best known only to taxonomists and amateur malacologists. The fact that *Trichia* Hartmann was recognized the type of a family group as late as 1956 also does not speak for a great importance of the genus. Furthermore, there is no long-standing uniformity in the use of *Trichia* for the molluscs. The name *Fruticicola* Held, 1837 was for a long time used for the type species of *Trichia* and I have always known the taxon as *Fruticicola hispida* (Linnaeus, 1758), a name used certainly beyond the middle of the 20th century (cf. para. 4 of the application). The name *Trichia* Hartmann has always been rather controversial because of the simultaneous use of *Trichia* De Haan, 1839 in Crustacea. Furthermore, *Trochulus* is not an entirely unknown name and has been used during the 20th century. The family-group name based on it (TROCHULINAE Lindholm, 1927) long before that based on *Trichia* Hartmann demonstrates this.

Concluding, I wish to remark that the discovery of *Trichia* Hoffman, 1790 as the oldest homonym, invalidating both *Trichia* De Haan, 1839 and *Trichia* Hartmann, 1840, is more or less a blessing, wiping away the controversy over priority between the crustacean and molluscan names. It means that there is no longer ambiguity over whether the crustacean or the molluscan name *Trichia* is meant, and no numerous and complicated manoeuvres by the Commission are needed to save the least deserving of the three names. In Crustacea the disappearance of the name *Trichia* has been accepted by all the workers that I contacted, and the replacement by *Zalasius* Rathbun, 1897 will not cause much confusion, especially when accepted immediately. I would expect that in Mollusca the disappearance of *Trichia* Hartmann will not do much harm, especially as the name of the genus has changed several times in its history, and a period of stability can be expected with the introduction of *Trochulus*. The latter name has not been used for other genera and there is no question of switching it from one genus to another. The only argument for starting the complicated machinery of the Commission for saving *Trichia* Hartmann, 1840 is its frequent usage in the last ten years, but in Myxomycetes (or Mycetozoa) *Trichia* has clearly been used unambiguously for a much longer period of time. My plea is that in this case the Code should be strictly applied, this being the most simple and least time consuming procedure.

Comment on the proposed conservation of *Polydora websteri* Hartmann in Loosanoff & Engle, 1943 (Annelida, Polychaeta) by a ruling that it is not to be treated as a replacement name for *P. caeca* Webster, 1879, and designation of a lectotype for *P. websteri*

(Case 3080; see BZN **55**: 212–216; **57**: 43–45)

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In a recent paper in *Ophelia* (October 1999) we described a new spionid polychaete as *Polydora neocaeca*. The new nominal species, a boring mudworm, was based on material from Rhode Island and has its own holotype, description and type locality (see paras. 6 and 10 of the application; Williams & Radashevsky, 1999; and comments by Drs Geoffrey B. Read and Mary E. Petersen in BZN **57**: 44 and 45, March 2000). We believe this to be the same taxon as *P. caeca* Webster, 1879, the name for which is a junior secondary homonym of *P. coeca* (Örsted, 1843), a tube-dwelling spionid.

In a single place in our paper (Williams & Radashevsky, 1999, p. 116) we unfortunately noted that '*Polydora neocaeca* is described to replace the permanently invalid name *P. caeca*'. This might indicate that we proposed *neocaeca* as a replacement name (nomen novum) for *caeca* Webster (and, in this situation, *neocaeca* would automatically have had the same type material as *caeca*).

To avoid any ambiguity we should like to clarify the nomenclatural status of *Polydora neocaeca* Williams & Radashevsky, 1999. The name was established as that of a new nominal species, and not as a replacement (nomen novum) for *P. caeca* Webster. We believe that *P. neocaeca* represents the same taxon as Webster described, but the synonymy is subjective and not objective.

Comments on the proposed conservation of the specific name of *Hybognathus stramineus* Cope, 1865 (currently *Notropis stramineus*; Osteichthyes, Cypriniformes) (Case 3131; see BZN **56**: 240-246)

(1) David A. Etnier

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I have read and am familiar with the application to conserve the specific name of *Notropis stramineus* (Cope, 1865) for the common North American minnow called the sand shiner.

Wayne Starnes and I (Etnier & Starnes, 1993) were aware of Mayden & Gilbert's (1989) recognition of the obscure and unused *Notropis ludibundus* (Girard, 1856) as an earlier name for the sand shiner, and had learned by personal communication with Prof R.M. Bailey that applications were in preparation to conserve both *Notropis topeka* (C.H. Gilbert, 1884) (mentioned in para. 10 of the current application) and *N. stramineus*. This information was made generally available to North American ichthyologists in the fifth edition of the checklist of *Common and scientific names of fishes from the United States and Canada* (Robins et al., 1991) (para. 5 of the application). In 1993 we followed Article 23b of the 1985 Code and retained the use of *Notropis stramineus* while the case was in prepartion, as did Jenkins & Burkhead (1994) for the same reason.

In my view a very few uninformed or deliberate recent uses of *Notropis ludibundus* as the name for the sand shiner (para. 7 of the application) should not be a concern in the Commission's decision. Nomenclatural stability is best served by retaining the name *N. stramineus* (Cope, 1865) and rejecting *N. ludibundus* (Girard, 1856).

(2) Bruce A. Thompson

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Royal D. Suttkus

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We support Reeve M. Bailey's application for retention of the specific name of *Notropis stramineus* (Cope, 1865), and the suppression of the synonym *N. ludibunda* (Girard, 1856) and possible synonym *Alburnus lineolatus* Putnam, 1863.

We made our decision on the universal use of the name *N. stramineus* since 1958 (para. 5 of the application) and to ensure nomenclatural stability. Additionally, because of the poor condition of specimen ANSP 2841 in the Academy of Natural Sciences of Philadelphia, the lectotype of *N. ludibunda* designated by Mayden & Gilbert (1989), that is, part of the head missing, fins broken, uncertainty of place of origin (collection site), lack of pigmentation characters, pharyngeal teeth missing and the fact that it is an immature specimen, identification will continue to be questionable to some ichthyologists.

(3) C. Richard Robins and Frank B. Cross

Museum of Natural History and Biodiversity Research Center, Lawrence, Kansas, U.S.A.

We write in support of the application by Reeve M. Bailey to conserve the specific name of *Hybognathus stramineus* Cope, 1865. This species, currently named *Notropis stramineus*, is one of the most abundant and broadly distributed of North American freshwater fishes and is widely treated in the popular and semipopular literature, including dozens of state and regional ichthyologies.

The name *Notropis ludibundus* has crept into the scientific literature (para. 7 of the application) but the use of *N. stramineus* is so widespread that to change this name would be a great disservice. We also note that the print runs of the popular literature are vastly larger than those of the scientific reports.

Although Cross & Collins (1995) used *Notropis ludibundus* in their revision, the senior author of that work is a co-author of this note supporting the conservation of *stramineus*.

(4) Robert E. Jenkins

Department of Biology, Roanoke College, Salem, Virginia 24153-3794, U.S.A.

I strongly support the proposed conservation of the specific name of *Notropis stramineus* (Cope, 1865) for the sand shiner. It remains entrenched. When writing the huge book titled *Freshwater fishes of Virginia* (Jenkins & Burkhead, 1994), I had to contend with the name *N. lundiundus* (Girard, 1856) that some upstarts tried to use to displace the name *N. stramineus*. I considered retaining use of *stramineus* to be much more in the interest of stability, and I still believe so.

I urge the Commission to conserve the name *stramineus*.

Comments on the proposed suppression of all prior usages of generic and specific names of birds (Aves) by John Gould and others conventionally accepted as published in the *Proceedings of the Zoological Society of London*
(Case 3044; see BZN **54**: 172–182; **55**: 176–185; **56**: 274–280)

Murray D. Bruce and Ian A.W. McAllan
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Schodde & Bock (BZN **56**: 279–280) have published a reply to our previous comment (BZN **56**: 274–279) on their application, and we wish to make a response. Our support of case-by-case analysis of the names involved, which would require only a few proposals to be submitted to the Commission, remains the principal objective of our opposition to Case 3044.

Schodde & Bock refer (their para. 2) to the 'daunting prospect' of 'didactic word games' and 'protracted debates' which would result from our approach, but this is at best misleading and at worst scaremongering. In Case 3044 and subsequently they have made much of the SCON meeting in Vienna in 1994, although this was not a formal meeting but an informal gathering of the few SCON members present in Vienna and a much larger number of non-members. They claim (their final para.) that 'one of us commented to the effect that ... it was up to others to provide solutions'. The implication is that we raised issues and then left others to take the responsibility for solving them. Nothing could be further from the truth. The comment actually referred to the summary of our 1991 paper, in which we noted that submissions to the Commission might be needed in a few instances. Naturally we would not wish to seek the blanket suppression of our own findings which has been proposed by Schodde & Bock, and we continue to oppose Case 3044. It contradicts our opinion that those few issues in our paper which could affect nomenclatural stability should be dealt with on an individual basis; the majority of our findings merely deal with the citation of different sources for names from those given in standard references, and these can be easily absorbed in the ornithological literature.

We wish to refer further to Bonaparte's (1855) name '*Somateria v.-nigrum*' (see our comment in BZN **56**: 277, para. 11 and Schodde & Bock's response in BZN **56**: 279, 4th para.). Bonaparte's relevant paragraph is divided into two parts, indicated by the author placing three periods between the note on the juvenile specimen and the brief discussion of the specimen at the British Museum. There is no direct connection because Bonaparte discussed two separate items linked only in relating to the same genus of ducks. The new name '*v.-nigrum*' is linked to the British Museum type material only.

Comments on the proposed designation of neotypes for the nominal species *Vespertilio pipistrellus* Schreber, 1774 and *V. pygmaeus* Leach, 1825 (currently *Pipistrellus pipistrellus* and *P. pygmaeus*; Mammalia, Chiroptera)
(Case 3073; see BZN **56**: 182–186; **57**: 49–50)

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1. We agree with most of the points in the application by Jones & Barratt. Until recently two cryptic species of pipistrelle bats with a largely overlapping distribution range were regarded as a single species, *Pipistrellus pipistrellus* (Schreber, 1774). Across large parts of Europe, including Scandinavia, Spain and Greece, the 45kHz and 55kHz 'phonic types' (now species) of pipistrelles show little intraspecific but much interspecific genetic variability in the mitochondrial and nuclear genomes (F. Mayer and O. Halversen, unpublished) and morphology (Häussler, Nagel, Braun & Arnold, 1999).

2. Jones & Barratt have proposed neotypes for both the species, under the names *P. pipistrellus* (Schreber, 1774) for the species with the lower-pitched call and *P. pygmaeus* (Leach, 1825) for that with the higher-pitched call. We agree that *P. pipistrellus* should be assigned to the former species: Schreber's description was based on the observations of Daubenton (1759) who lived in Montbart in France, a region where the 45kHz phonic type is much more common than the 55kHz one (Letard & Tupinier, 1997). The latter phonic type is distributed over the whole of Europe but is most common in the Mediterranean area (F. Mayer & O. Helversen, unpublished).

3. We do not agree with selecting *P. pygmaeus* (Leach, 1825) as the appropriate name for the 55kHz phonic type, for the following reasons:

(a) The holotype of *Vespertilio pygmaeus* is a juvenile (which explains its small size), and its dark colour suggests that it probably belongs to the 45kHz phonic type. The designation of a neotype should not disagree with this.

(b) The earliest available name which clearly refers to the 55kHz phonic type is *P. p. mediterraneus* Cabrera, 1904, which was described from the vicinity of Valencia, Spain. We (Mayer & Halversen, unpublished) have found only echolocation calls of the 55kHz kind from the pipistrelles of this area; no calls with an end frequency of about 45kHz were ever detected. The DNA sequence of the ND1 gene was obtained from one specimen from Valencia and resembled the characteristic sequence of the 55kHz phonic type. Cabrera (1904) mentioned a morphological character (the length proportions of the second and third phalanges of the third digit) which is distinctive of the 55kHz phonic type (Häussler, Nagel, Braun & Arnold, 1999). Jones & Barratt agree (para. 6 of their application) that Cabrera's name *mediterraneus* refers to the 55kHz phonic type.

(c) Nearly all the publications of recent decades referring to the pipistrelle form which is, on average, smaller in size and lighter coloured have used the name *P. pipistrellus mediterraneus* Cabrera, 1904 (for example Bauer, 1957; Lehmann, 1966; Gaisler, 1983; Weid & Helversen, 1987; Ibánez & Fernández, 1989; Kowalski & Rzebik-Kowalska, 1991; Kalko & Schnitzler, 1993; Kalko, 1994; Steiner & Gaisler, 1994). Following the application by Jones & Barratt, *P. pygmaeus* has been used by Braun & Häussler (1999) and Häussler, Nagel, Braun & Arnold (1999), while Häussler, Nagel, Herzig & Braun (1999) and Herzig (1999) have used the notation *Pipistrellus* '*pygmaeus*/*mediterraneus*'.

4. We propose that the Commission should accept the neotype of *Vespertilio pipistrellus* Schreber, 1774 put forward by Jones & Barratt, but that the name

Pipistrellus mediterraneus Cabrera, 1904 should be put on the Official List instead of *P. pygmaeus* Leach, 1825. *P. mediterraneus* is defined by the lectotype designated by Ibánez & Fernández, 1989.

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Lehmann, E. von. 1966. Taxonomische Bemerkungen zur Säugerausbeute der Kumerloeveschen Orientreisen 1953–1965. *Zoologische Beiträge*, Berlin, **12**: 251–317.

Steiner, H.M. & Gaisler, J. 1994. On a collection of bats (Chiroptera) from NE Turkey and N Iran. *Acta Scientiarum Naturalium Academiae Scientiarum Bohemoslovacae* (Brno), **28**: 1–37.

Weid, R. & Helversen, O. von. 1987. Ortungsrufe Europäischer Fledermäuse beim Jagdflug im Freiland. *Myotis*, **25**: 5–27.

(2) A.M. Hutson

The Bat Conservation Trust, 15 Cloisters House, 8 Battersea Park Road, London SW8 4BG, U.K.

I write to urge the Commission to accept the application by Jones & Barratt. It is an effective way of stabilizing the first available and appropriate names for the two *Pipistrellus* species.

At a recent meeting (February 2000) of the Advisory Committee to the Agreement on the Conservation of Bats in Europe (an Agreement of the Bonn Convention), the question was discussed and it was apparent that authors from different countries were starting to use both of the names *P. pygmaeus* (Leach, 1825) and *P. mediterraneus* Cabrera, 1904 for the recently recognized second species.

There are more than 15 names which might apply to either species, and *mediterraneus* is one of the most recent of them (see Corbet, 1978, 1984; Pavlinov et al., 1995). For long-term stability it is desirable to use the earliest of the names, and I support the designation of neotypes for the nominal species *Vespertilio pipistrellus* Schreber, 1774 and *V. pygmaeus* Leach, 1825 as proposed by Jones & Barratt.

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(3) Gareth Jones

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I am pleased that the comments published (BZN **57**: 49–50) from six contributors and from Hutson (above) show strong support for the use of the names *Pipistrellus pipistrellus* and *P. pygmaeus* for the 45kHz and 55kHz phonic types of pipistrelle. The only opposition so far has come from Helversen, Mayer & Kock in their comment above, who recommend use of the name *P. mediterraneus* for the 55kHz phonic type. There are several reasons for preferring the name *pygmaeus* to *mediterraneus*:

(a) It is much older. There are at least 15 synonyms available between *pygmaeus* (1825) and *mediterraneus* (1904), and if any of these could be shown (e.g. by DNA analysis of specimens) to refer to the 55kHz phonic type the nomenclature of the species would be forced to change again. Hence *pygmaeus* provides a much more stable solution than *mediterraneus*.

(b) G.H.H. Tate (1942; *Results of the Archbold Expeditions*, no. 47, p. 238) regarded *mediterraneus* as a race of *P. nathusii*, so there is some confusion in the history of the name.

(c) The name *P. pygmaeus* is now being used in publications (e.g. those by Häussler and his colleagues, mentioned by Helversen, Mayer & Kock in their comment, and by Russo & James in a paper (*Mammalia*, in press)) on the occurence of the two cryptic species in Italy. *The New Handbook on British Mammals* is about to go to press, and will be using the names *P. pipistrellus* and *P. pygmaeus* for the two species. To use *mediterraneus* now would create confusion.

(d) The application in Case 3073 by Jones & Barratt received no objections at a workshop at the 7th European Bat Research Symposium (Krakow, 23–27 August 1999).

Like Helversen & Mayer, Barratt, Jones & Racey have developed distinctive microsatellite markers for the cryptic species. We have been unable to extract DNA from Leach's holotype of *P. pygmaeus*, and believe it is unlikely that genetic analysis of that specimen is possible with current techniques. The specimen is not suitable for use in investigations because it is an infant; it cannot be allocated to the 45 kHz phonic type (cf. the comment by Helversen, Mayer & Kock) on the basis of its present colour. Preliminary investigations of DNA-typed preserved specimens suggest that the length proportions of the second and third phalanges of the third digits cannot separate the species conclusively.

I urge the Commission to approve Case 3073 as soon as possible.

Comments on the proposed conservation of usage of the names *Mystacina* Gray, 1843, *Chalinolobus* Peters, 1866, *M. tuberculata* Gray, 1843 and *C. tuberculatus* (J.R. Forster, 1844) (Mammalia, Chiroptera)
(Case 3095; see BZN **56**: 250–254)

(1) Martyn Kennedy

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I support Spencer & Lee's application for the conservation of name usage for the New Zealand bats *Mystacina tuberculata* Gray, 1843 and *Chalinolobus tuberculatus* (J.R. Forster, 1844); their argument is compelling. These names have been universally accepted for a century or more (in addition to references cited in the application see Miller (1907), Pierson et al. (1986), Koopman (1994), Hand et al. (1998) and Kennedy et al. (1999)). The name *M. velutina* Hutton, 1872 has been used instead of *M. tuberculata* only by Thomas (1905; as *Mystacops velutinus*) and by Mayer et al. (1999), in both cases on the mistaken grounds described in the application. Because New Zealand has only two known extant bat species they are commonly known by their vernacular and generic names, and the similarity of their specific names has not in fact caused confusion. The stable usage of *Mystacina tuberculata* should continue.

Additional references

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Kennedy, M., Paterson, A.M., Morales, J.C., Parsons, S., Winnington, A.P. & Spencer, H.G. 1999. The long and short of it: Branch lengths and the problem of placing the New Zealand short-tailed bat, *Mystacina*. *Molecular Phylogenetics and Evolution*, **13**: 405–416.

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(2) Kerry-Jayne Wilson

Ecology and Entomology Group, P.O. Box 84, Lincoln University, Canterbury, New Zealand

I lecture in vertebrate ecology at Lincoln University and have had three graduate students do theses on New Zealand bats. I have frequent contact with government agencies and, by means of broadcasts and written articles, with the lay public on matters concerning the ecology and conservation of New Zealand's native biota, including the bat species. I know of nobody who finds the existing scientific names of the bats confusing, and I urge their retention.

(3) Trevor Worthy

Palaeofaunal Surveys, 43 The Ridgeway, Nelson, New Zealand

I would like to go on record as supporting the well-founded arguments and proposals of Spencer & Lee. There is no doubt as to what taxa the names *Mystacina*

tuberculata and *Chalinolobus tuberculatus* refer to, and to change either of them would create confusion.

(4) Adrian Paterson

Ecology and Entomology Group, P.O. Box 84, Lincoln University, Canterbury, New Zealand

I use the name *Mystacina tuberculata* Gray, 1843 frequently, in teaching, research and publications. This bat is subject to a great deal of research in New Zealand due to its uniqueness and high conservation needs, and its scientific name is in constant usage. I strongly support the application.

(5) Peter D. Dwyer

Anthropology Program, Department of Geography and Environmental Studies, University of Melbourne, Victoria, Australia 3010

I agree with the proposals to preserve the universal usage of the names *Mystacina tuberculata* Gray, 1843 and *Chalinolobus tuberculatus* (J.R. Forster, 1844). Spencer & Lee's discussion and recommendations reach beyond, but concur with, my own conclusions (Dwyer, 1960, pp. 10–12; 1962, pp. 2–3). Hutton's (1872) specific name *velutina* was an unnecessary replacement name for Gray's *Mystacina tuberculata*, and apart from Thomas (1905) and Mayer et al. (1999) has been used by nobody. I support Spencer & Lee's application in the interests of nomenclatural stability.

Additional references

Dwyer, P.D. 1960. *Studies on New Zealand Chiroptera*. Unpublished M.Sc. thesis, Victoria University of Wellington, New Zealand.

Dwyer, P.D. 1962. Studies on the two New Zealand bats. *Zoology Publications from Victoria University of Wellington*, **28**: 1–28.

Comments on the proposed conservation of *Holochilus* Brandt, 1835, *Proechimys* J.A. Allen, 1899 and *Trinomys* Thomas, 1921 (Mammalia, Rodentia) by the designation of *H. sciureus* Wagner, 1842 as the type species of *Holochilus*
(Case 3121; see BZN **56**: 255–261)

(1) Ulyses F.J. Pardiñas

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After a careful study of the application I completely agree with the proposal to conserve the names *Holochilus* Brandt, 1835, *Proechimys* J.A. Allen, 1899 and *Trinomys* Thomas, 1921 for three genera of Neotropical rodents.

My concerns lie with *Holochilus* as I have worked with sigmodontines, particularly fossils but extant as well, for the last 10 years. This genus has a rich fossil record in southern South America, ranging from Middle Pleistocene to Holocene (see Pardiñas, 1999). The first citations (as *Holochilus multannus* Ameghino, 1889 and

H. vulpinus (Brants, 1827)) in the paleontological literature were by Florentino Ameghino in his (1889) classical work 'Contribución al Conocimiento de los Mamíferos Fósiles de la República Argentina'. Since then, numerous fossil remains have been described in Argentina, Uruguay, Brazil, including an extinct species from the Pleistocene in Bolivia (see Steppan, 1996; para. 1 of the appplication). In this context, *Holochilus* remains are morphologically distinguishable with respect to the teeth, mandible and skull. A proof of this is the absence of synonyms — at generic level — from the paleontological record, in clear contrast to many other sigmodontines such as *Necromys* Ameghino, 1889, *Reithrodon* Fischer, 1814 or *Graomys* Waterhouse, 1837 (see Massoia & Pardiñas, 1993; Pardiñas, 1995).

The designation of *Holochilus sciureus* Wagner, 1842 as the type species of the genus *Holochilus* will be a good choice to conserve the stability of a strong and well known generic name.

I emphatically support the application made by Voss & Abramson.

Additional references

Massoia, E. & Pardiñas, U.F.J. 1993. El estado sistemático de algunos muroideos estudiados por Ameghino en 1889. Revalidación del género *Necromys* (Mammalia, Rodentia, Cricetidae). *Ameghiniana*, **30**(4): 407–418.

Pardiñas, U.F.J. 1995. Sobre las vicisitudes de los géneros *Bothriomys* Ameghino, 1889, *Euneomys* Coues, 1874 y *Graomys* Thomas, 1916 (Mammalia, Rodentia, Cricetidae). *Ameghiniana*, **32**(2): 173–180.

Pardiñas, U.F.J. 1999. Fossil murids: taxonomy, paleoecology, and paleoenvironments. *Quaternary of South America and Antarctic Peninsula*, **12**: 225–254.

(2) Marisol Aguilera

Universidad Simón Bolívar, Caracas, Venezuela

I write to support the application made by Robert S. Voss and Nataliya I. Abramson. I agree with keeping the name of *Holochilus* Brandt, 1835 for a genus of myomorphous neotropical marsh rats, and those of *Proechimys* J.A. Allen, 1899 and *Trinomys* Thomas, 1921 for hystricomorphous neotropical spiny rats.

(3) James L. Patton

Museum of Vertebrate Zoology, University of California, Berkeley, California 94720, U.S.A.

I write in strong support of the proposal by Robert S. Voss and Nataliya I. Abramson to conserve the present usage of the names *Holochilus* Brandt, 1835, *Proechimys* J.A. Allen, 1899 and *Trinomys* Thomas, 1921 by the designation of *H. sciureus* Wagner, 1842 as the type species of *Holochilus*.

As amply documented in the case presented, these names have been widely applied to individually well-recognized groups of rats in a very diverse literature, one that includes a vast array of ecological, genetic and epidemiological studies as well as systematic, phylogenetic and biogeographic analyses. As currently recognized, spiny rats of the genus *Proechimys* (sensu stricto) are among the most speciose and locally common members of the lowland moist forest communities of Amazonia north to

Central America, and *Trinomys* occupies the same position within the Mata Atlantica of coastal Brazil. *Holochilus* is widely distributed throughout the moist grasslands and forests of South America and is a major pest in many agricultural areas. While species boundaries in each taxon may still be insecure, and new species continue to be described, the generic assignments for each of these has not been in doubt for the last 80 years or longer.

The proposal in Case 3121 thus represents a simple solution that would maintain a stability in usage of long-standing and preserve the effective communication now present across a wide range of biological disciplines. I urge the Commission to accept this proposal.

Comments on the proposed conservation of *Cervus gouazoubira* Fischer, 1814 (currently *Mazama gouazoubira*; Mammalia, Artiodactyla) as the correct original spelling
(Case 3018; see BZN **56**: 262–265)

(1) Robert S. Voss

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I fully support A.L. Gardner's application to conserve the current spelling of the specific name of the brown brocket deer, which has almost universally been known as *Mazama gouazoubira* (Fischer, 1814) for many years.

As information retrieval from the scientific literature becomes increasingly dependent on computer searches, capricious spelling changes of taxon names are serious threats to effective communication among researchers. No purpose is served by reverting to Fischer's original spelling.

(2) Peter Grubb

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I write to support Gardner's proposal that the name *Mazama gouazoubira* should be used for the brown brocket, even though the original name was *Cervus gouazoupira* Fischer, 1814.

It is appropriate to present some additional background information concerning this case. There has hitherto been a mood to establish or maintain the original spelling as the valid species-group name even when it has not been generally employed in the literature. Other examples occur in Wilson & Reeder (1993): *Neotragus pygmeus* (from *Capra pygmea* Linnaeus, 1758) replaced *N. pygmaeus*; and *Funisciurus pyrropus* (from *Sciurus pyrropus* F. Cuvier, 1833) replaced *F. pyrrhopus*. Further cases where the generally accepted spelling has recently been replaced by the original one are *Pudu pudu* (from *Capra puda* Molina, 1782; not *P. pudu*; see Hershkovitz, 1982, p. 60) and *Galagoides demidoff* (from *Galago demidoff* Fischer, 1806; not *G. demidovii*; see Jenkins, 1987, p. 98). Attempts to restore the 'incorrect' *Felis lybica* to *F. libyca* or *Naemorhedus* to *Nemorhaedus* (see Ellerman & Morrison-Scott, 1951, p. 304 and amendment sheet) have not proved wholly acceptable. I believed that I was following a trend (Grubb in Wilson & Reeder, 1993) by treating

Mazama gouazoubira as an incorrect subsequent spelling and *M. gouazoupira* (Fischer, 1814) as the correct original spelling, though I would agree that this was not a positive contribution to stability. However, until recently there was no procedure to conserve a preferred emendation other than by appealing to the Commission. This Gardner has now done, and very clearly. He should be supported.

The new Code (4th Edition), laying clearer emphasis on stability, renders these exercises unnecessary in the future by providing a firm distinction between a nomen oblitum and a nomen protectum (Article 23.9): between the original but almost universally rejected or ignored spelling and the generally accepted spelling. One will no longer see the unsupported statement that an original spelling is a lapsus in such examples as the following: *Tadarida teniotis rueppellii* (*Dysopes rüpelii* Temminck, 1826), *Callicebus brunneus* (*Callithrix brunea* Wagner, 1842), *Procolobus badius temminckii* (*Colobus temminkii* Kuhl, 1820), *Vulpes rueppellii* (*Canis rüppelii* Schinz, 1825), *Hendecapleura* (*Endecapleura* Lataste, 1882), and *Myomyscus verreauxi* (*Mus verroxii* A. Smith, 1834). These emendations are likely to be nomina protecta. Perhaps it is worth indicating that a correction to spelling in itself is not necessarily going to become a nomen protectum: Rosevear's (1969, p. 201) emendation of *Tatera welmanni* (*Taterona welmanni* St Leger, 1929) to *T. welmani* on the grounds that the taxon was named after J.B. Welman has not been supported in the literature, and there is no move to emend *Equus chapmanni* Layard, 1865, named after J. Chapman. Clear distinctions must be made between (a) misspelled names whose status has not been challenged and which should remain valid; (b) neglected original spellings whose restoration has not been challenged; (c) widely used emendations which become nomina protecta under the new Code; and (d) rational emendations which have not been adopted in the literature and therefore remain unjustified.

Additional references

Ellerman, J.R. & Morrison-Scott, T.C.S. 1951. *Checklist of Palaearctic and Indian mammals 1758 to 1946*. 810 pp. British Museum, London.

Hershkovitz, P. 1982. Neotropical deer (Cervidae). Part 1. Pudus, genus *Pudu* Gray. *Fieldiana* Zoology, **11**: 1–86.

Jenkins, P.D. 1987. *Catalogue of Primates in the British Museum (Natural History) and elsewhere in the British Isles*, part 4 (Suborder Strepsirrhini). 189 pp. British Museum (Natural History), London.

Rosevear, D.R. 1969. *The rodents of West Africa*. 604 pp. British Museum (Natural History), London.

Comment on the proposed conservation of LORISIDAE Gray, 1821 and GALAGIDAE Gray, 1825 (Mammalia, Primates) as the correct original spellings

(Case 3004; see BZN **55**: 165–168; **56**: 73; **57**: 51)

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In their request to the Commission to reject our proposal to conserve LORISIDAE and GALAGIDAE as the correct original spellings, Groves & Jenkins (BZN **57**: 51, March 2000) rest their argument on the use of LORIDAE and GALAGONIDAE in 'at least four influential works' that appeared subsequent to Jenkins's (1987) resurrection of the latter two family names. One of these publications (McKenna & Bell, 1997) would have incorporated the names LORISIDAE and GALAGIDAE had the application, which was submitted in 1995, not been delayed by other matters before the Commission. But, more importantly, we suggest that if the spirit of the Code to maintain stability is to be upheld, LORISIDAE and GALAGIDAE should be conserved as the correct original spellings not only for the reason, as we demonstrated in our original proposal, that with extremely minor exceptions these have been the predominant spellings in the primatological literature, but also because they continue to be the forms used in those recent publications that are and will have the most impact on current and future students of primates. Since Jenkins's (1987) publication, LORISIDAE and GALAGIDAE (and/or LORISINAE and GALAGINAE) have been used, for example, by Martin (1990), Conroy (1990), Fleagle (1988, which was replaced by Fleagle, 1999), Delson et al. (2000, which superseded Tattersall et al., 1988), and Ankel-Simons (2000), all of which constitute primary sources for both the teaching and research activities of those who specialize in primate studies, which span the gamut from systematics to paleontology, ecology and behavior. The widespread use of these influential works in teaching at the undergraduate as well as graduate level in the production of future generations of primate specialists adds further to the need to maintain stability in nomenclature. We should also mention that LORISIDAE and GALAGIDAE (and/or LORISINAE and GALAGINAE) remain in use in the nine most popular undergraduate textbooks in biological and physical anthropology. In addition, Nowak (1999), which is a standard reference work on living mammals, continues the long-standing tradition of recognizing these familiar family-group names. Of course, this discussion does not include the many articles published since 1987 that use these family (and/or subfamily) names.

The Commission is requested to accept our proposal.

As for the spellings of the names for other primate groups that Groves & Jenkins mention, INDRIDAE (for 'INDRIIDAE'), STREPSIRRHINI (for 'STREPSIRHINI') and HAPLORRHINI (for 'HAPLORHINI'), we purposefully chose not to include discussion of them in our original proposal in order not to complicate matters. We had intended to bring these issues before the Commission following our original proposal. Since, however, Groves & Jenkins have now introduced these items, we must point out that all but one of the primate reference works cited above that continue the tradition of using LORISIDAE and GALAGIDAE (and/or LORISINAE and GALAGINAE) also continue the tradition of using STREPSIRHINI, HAPLORHINI and INDRIIDAE as the correct spellings. In addition, in his widely used human evolution text, Conroy (1997) maintains the spellings STREPSIRHINI and HAPLORHINI in his background review of the major subdivisions of Primates. Thus, the arguments we made in our original proposal as well as here to preserve LORISIDAE and GALAGIDAE also apply to the conservation of STREPSIRHINI, HAPLORHINI and INDRIIDAE as the correct spellings.

Additional references

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Conroy, G.C. 1997. *Reconstructing human origins: a modern synthesis*. Norton, New York.

Conroy, G.C. 1990. *Primate evolution*. Norton, New York.

Delson, E., Tattersall, I., Van Couvering, J.A. & Brooks, A.S. (Eds.). 2000. *Encyclopedia of human evolution and prehistory*, Ed. 2. Garland Publishing, New York.

Fleagle, J.G. 1999. *Primate adaptation and evolution*, Ed. 2. Academic Press, New York.

Nowak, R.M. 1999. *Walker's mammals of the world*, Ed. 6. The Johns Hopkins University Press, Baltimore.

Tattersall, I., Delson, E. & Van Couvering, J.A. (Eds.). 1988. *Encyclopedia of human evolution and prehistory*. Garland Publishing, New York.

OPINION 1950

Haliotis clathrata Reeve, 1846 (non Lichtenstein, 1794) and *H. elegans* Philippi, 1844 (Mollusca, Gastropoda): specific names conserved

Keywords. Nomenclature; taxonomy; Gastropoda; Prosobranchia; HALIOTIDAE; *Haliotis clathrata*; *Haliotis elegans*.

Ruling

(1) Under the plenary power the specific name *clathrata* Lichtenstein, 1794, as published in the binomen *Haliotis clathrata*, and all uses of the name *Haliotis clathrata* prior to the publication of *Haliotis clathrata* Reeve, 1846, are hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:
(a) *clathrata* Reeve, 1846, as published in the binomen *Haliotis clathrata*;
(b) *elegans* Philippi, 1844, as published in the binomen *Haliotis elegans*.

(3) The name *clathrata* Lichtenstein, 1794, as published in the binomen *Haliotis clathrata* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 3036

An application for the conservation of the specific names of *Haliotis clathrata* Reeve, 1846 and *H. elegans* Philippi, 1844 was received from Dr D.L. Geiger (*University of Southern California, Los Angeles, California, U.S.A.*) and Dr K.A. Stewart (*Carmel Valley, California, U.S.A.*) on 23 December 1996. After correspondence the case was published in BZN **55**: 209 211 (December 1998). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that the work cited as 'Geiger & Groves, under review' in para. 5 of the application had been published:

Geiger, D.L. & Groves, L.T. 1999. Review of fossil abalone (Gastropoda: Vetigastropoda: Haliotidae) with comparison to Recent species. *Journal of Paleontology*, **73**: 872–885.

Decision of the Commission

On 1 December 1999 the members of the Commission were invited to vote on the proposals published in BZN **55**: 210. At the close of the voting period on 1 March 2000 the votes were as follows:

Affirmative votes — 19: Bock, Bouchet, Brothers, Cocks, Cogger, Eschmeyer, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Papp, Ride, Savage, Schuster, Song, Štys

Negative votes — 3: Dupuis, Heppell and Patterson.

No vote was received from Mawatari.

Lehtinen was on leave of absence.

Bouchet commented: 'The application (para. 3) states that 'one holotype and two paratypes' of *Haliotis clathrata* Reeve, 1846 are in the Natural History Museum, London. There are, in fact, three syntypes (as noted by Yen, 1942), and no holotype or lectotype was ever designated'.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

clathrata, *Haliotis*, Lichtenstein, 1794, *Catalogus rerum naturalium rarissimum. Sectio secunda continens Conchylia, item mineralia, ligna exotica, et arte parata*, p. 105.

clathrata, *Haliotis*, Reeve, 1846, *Conchologia Iconica*, vol. 3, Monograph of the genus *Haliotis*, pl. 17, fig. 71.

elegans, *Haliotis*, Philippi, 1844, *Abbildung und Beschreibungen neuer oder weniger gekannter Conchylien*, vol. 1, part 5, p. 119.

OPINION 1951

Spherillo Dana, 1852 (Crustacea, Isopoda): *Spherillo vitiensis* Dana, 1853 designated as the type species

Keywords. Nomenclature; taxonomy; Crustacea; Isopoda; ONISCIDEA; *Spherillo*; *Spherillo vitiensis*; woodlice.

Ruling

(1) Under the plenary power all previous fixations of type species for the nominal genus *Spherillo* Dana, 1852 are hereby set aside and *Spherillo vitiensis* Dana, 1853 is designated as the type species.

(2) The name *Spherillo* Dana, 1852 (gender: masculine), type species by designation under the plenary power in (1) above *Spherillo vitiensis* Dana, 1853 is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *vitiensis* Dana, 1853, as published in the binomen *Spherillo vitiensis* and as defined by the neotype (catalogue no. 7635 in the Swedish Museum of Natural History, Stockholm) designated by Lehtinen, Taiti & Ferrara (1998) (specific name of the type species of *Spherillo* Dana, 1852) is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *Sphaerillo* Verhoeff, 1926 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology (an unjustified emendation of *Spherillo* Dana, 1852).

(5) The name *scamnorum* Verhoeff, 1938, as published in the binomen *Melanesillo scamnorum*, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology (a junior objective synonym of *Spherillo vitiensis* Dana, 1853).

History of Case 2911

An application for the designation of *Spherillo vitiensis* Dana, 1853 as the type species of *Spherillo* Dana, 1852 was received from Dr Pekka T. Lehtinen (*Zoological Museum, University of Turku, Turku, Finland*) and Drs Stefano Taiti and Franco Ferrara (*Centro di studio per la faunistica ed ecologia tropicali, Florence, Italy*) on 1 November 1993. After correspondence the case was published in BZN **55**: 217–219 (December 1998). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 December 1999 the members of the Commission were invited to vote on the proposals published in BZN **55**: 218 219. At the close of the voting period on 1 March 2000 the votes were as follows:

Affirmative votes — 22: Bock, Bouchet (part), Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Papp, Patterson, Ride, Savage, Schuster, Song, Štys

Negative votes — none.

No vote was received from Mawatari.

Lehtinen was on leave of absence.

Bouchet voted for the designation of *Spherillo vitiensis* Dana, 1853 as the type species of *Spherillo* Dana, 1852, and placement of *Spherillo* and *Sphaerillo* Verhoeff, 1926, respectively, on the Official List and Official Index, but abstained from the placement of *S. vitiensis* and *Melanesillo scamnorum* Verhoeff, 1938, respectively, on the Official List and Official Index.

Original references

The following are the original references to the names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:

scamnorum, *Melanesillo*, Verhoeff, 1938, *Arkiv för Zoologi*, A**30**(16): 2.
Sphaerillo Verhoeff, 1926, *Nova Caledonia, Zoologie*, **4**(2): 250.
Spherillo Dana, 1852, *American Journal of Science and Arts*, (2)**14**: 301.
vitiensis, *Spherillo*, Dana, 1853, Isopoda *in*: *United States exploring expedition during the years 1838, 1839, 1840, 1841, 1842, under the command of Charles Wilkes, U.S.N.*, vol. 14 (Crustacea 2), p. 721.

The following is the reference for the designation of the neotype of *Spherillo vitiensis* Dana, 1853:

Lehtinen, P.T., Taiti, S. & Ferrara, F. 1998. BZN **55**: 218.

OPINION 1952

AUGOCHLORINI Beebe, 1925 (Insecta, Hymenoptera): given precedence over OXYSTOGLOSSINI Schrottky, 1909

Keywords. Nomenclature; taxonomy; Hymenoptera; HALICTIDAE; AUGOCHLORINI; OXYSTOGLOSSINI; *Augochlora*; *Oxystoglossa*; bees; neotropics.

Ruling

(1) Under the plenary power it is hereby ruled that the family-group name AUGOCHLORINI Beebe, 1925 and other family-group names based on *Augochlora* Smith, 1853 are to be given precedence over OXYSTOGLOSSINI Schrottky, 1909 and other family-group names based on *Oxystoglossa* Smith, 1853 whenever they are considered to be synonyms.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
   (a) *Augochlora* Smith, 1853 (gender: feminine), type species by subsequent designation by Cockerell (1923) *Halictus purus* Say, 1837;
   (b) *Oxystoglossa* Smith, 1853 (gender: feminine), type species by monotypy *Oxystoglossa decorata* Smith, 1853.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
   (a) *purus* Say, 1837, as published in the binomen *Halictus purus* (specific name of the type species of *Augochlora* Smith, 1853);
   (b) *decorata* Smith, 1853, as published in the binomen *Oxystoglossa decorata* (specific name of the type species of *Oxystoglossa* Smith, 1853);

(4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:
   (a) AUGOCHLORINI Beebe, 1925 (type genus *Augochlora* Smith, 1853), with the endorsement that it and other family-group names based on *Augochlora* are to be given precedence over OXYSTOGLOSSINI Schrottky, 1909 and other family-group names based on *Oxystoglossa* Smith, 1853 whevever they are considered to be synonyms;
   (b) OXYSTOGLOSSINI Schrottky, 1909 (type genus *Oxystoglossa* Smith, 1853), with the endorsement that it and other family-group names based on *Oxystoglossa* are not to be given priority over AUGOCHLORINI Beebe, 1925 and other family-group names based on *Augochlora* Smith, 1853 whevever they are considered to be synonyms.

History of Case 3054

An application for the family-group name AUGOCHLORINI (then cited with the authorship and date of 'Moure, 1943') to be given precedence over OXYSTOGLOSSINI Schrottky, 1909 was received from Dr Michael S. Engel (*American Museum of Natural History, New York, N.Y., U.S.A.*) on 16 July 1997. After correspondence the case was published in BZN **56**: 19–22 (March 1999). Notice of the case was sent to appropriate journals.

A note by the author of the application, published in BZN **56**: 198 (September 1999), pointed out that the name AUGOCHLORINI is available from Beebe (1925), 18 years earlier than the attribution to Moure (1943) given in the case. The change of authorship and date would not affect the application.

Decision of the Commission

On 1 December 1999 the members of the Commission were invited to vote on the proposals published in BZN **56**: 20. At the close of the voting period on 1 March 2000 the votes were as follows:

Affirmative votes – 20: Bock, Brothers, Cocks, Cogger, Eschmeyer, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Papp, Patterson, Ride, Savage, Schuster, Song, Štys

Negative votes — 1: Bouchet.

No votes were received from Dupuis and Mawatari.

Lehtinen was on leave of absence.

Dupuis declined to vote on the grounds that less than a year had elapsed since publication of the case. [*Editorial note*. An explanation of procedure followed in sending cases for voting was given in BZN **54**: 53–54, March 1997].

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Augochlora Smith, 1853, *Catalogue of hymenopterous insects in the collection of the British Museum*, part 1 (Andrenidae and Apidae), p. 73.

AUGOCHLORINI Beebe, 1925, *Zoologica*, **6**: 102.

decorata, *Oxystoglossa*, Smith 1853, *Catalogue of hymenopterous insects in the collection of the British Museum*, part 1 (Andrenidae and Apidae), p. 83.

Oxystoglossa Smith, 1853, *Catalogue of hymenopterous insects in the collection of the British Museum*, part 1 (Andrenidae and Apidae), p. 83.

OXYSTOGLOSSINI Schrottky, 1909, *Deutsche Entomologische Zeitschrift*, **1909**: 482.

purus, *Halictus*, Say, 1837, *Boston Journal of Natural History*, **1**: 395.

The following is the reference for the designation of *Halictus purus* Say, 1837 as the type species of the nominal genus *Augochlora* Smith, 1853:

Cockerell, T.D.A. 1923. *Annals and Magazine of Natural History*, (9)**11**: 448.

OPINION 1953

Strongylogaster Dahlbom, 1835 (Insecta, Hymenoptera): conserved by the designation of *Tenthredo multifasciata* Geoffroy in Fourcroy, 1785 as the type species

Keywords. Nomenclature; taxonomy; Hymenoptera; TENTHREDINIDAE; *Strongylogaster*; *Tenthredo multifasciata*; sawflies.

Ruling

(1) Under the plenary power all previous fixations of type species for the nominal genus *Strongylogaster* Dahlbom, 1835 are hereby set aside and *Tenthredo multifasciata* Geoffroy in Fourcroy, 1785 is designated as the type species.

(2) The name *Strongylogaster* Dahlbom, 1835 (gender: feminine), type species by designation under the plenary power in (1) above, *Tenthredo multifasciata* Geoffroy in Fourcroy, 1785, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *multifasciata* Geoffroy in Fourcroy, 1785, as published in the binomen *Tenthredo multifasciata* (specific name of the type species of *Strongylogaster* Dahlbom, 1835), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3064

An application for the conservation of *Strongylogaster* Dahlbom, 1835 by the designation of *Tenthredo multifasciata* Geoffroy in Fourcroy, 1785 as the type species was received from Drs Stephan M. Blank and Andreas Taeger (*Deutsches Entomologisches Institut, Eberswalde, Germany*) and Dr Tikahiko Naito (*Kobe University, Rokko, Kobe, Japan*) on 13 August 1997. After correspondence the case was published in BZN **56**: 23–26 (March 1999). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 December 1999 the members of the Commission were invited to vote on the proposals published in BZN **56**: 25. At the close of the voting period on 1 March 2000 the votes were as follows:

Affirmative votes — 21: Bock, Bouchet, Brothers, Cocks, Cogger, Eschmeyer, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Papp, Patterson, Ride, Savage, Schuster, Song, Štys

Negative votes — none.

No votes were received from Dupuis and Mawatari.

Lehtinen was on leave of absence.

Dupuis declined to vote on the grounds that less than a year had elapsed since publication of the case. [*Editorial note.* An explanation of procedure followed in sending cases for voting was given in BZN **54**: 53–54, March 1997].

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

multifasciata, *Tenthredo*, Geoffroy in Fourcroy, 1785, *Entomologia Parisiensis* ..., vol. 2, p. 368.

Strongylogaster Dahlbom, 1835, *Conspectus Tenthredinidum, Siricidum et Oryssinorum Scandinaviae, quas Hymenopterorum familias*, pp. 4, 13.

OPINION 1954

Labrus Linnaeus, 1758, *Cichlasoma* Swainson, 1839 and *Polycentrus* Müller & Troschel, 1849 (Osteichthyes, Perciformes): conserved by the designation of *Labrus mixtus* Linnaeus, 1758 as the type species of *Labrus* and *L. bimaculatus* Linnaeus, 1758 as the type species of *Cichlasoma*; and *Polycentrus schomburgkii* Müller & Troschel, 1849: specific name given precedence over *L. punctatus* Linnaeus, 1758

Keywords. Nomenclature; taxonomy; Osteichthyes; Perciformes; LABRIDAE; CICHLIDAE; NANDIDAE; POLYCENTRIDAE; *Labrus*; *Cichlasoma*; *Polycentrus*; *Labrus mixtus*; *Cichlasoma bimaculatum*; *Polycentrus schomburgkii*; *Polycentrus punctatus*.

Ruling

(1) Under the plenary power:

(a) all previous fixations of type species for the following nominal genera are hereby set aside:

(i) *Labrus* Linnaeus, 1758 and *Labrus mixtus* Linnaeus, 1758 is designated as the type species;

(ii) *Cichlasoma* Swainson, 1839 and *Labrus bimaculatus* Linnaeus, 1758 is designated as the type species;

(b) it is hereby ruled that the specific name *schomburgkii* Müller & Troschel, 1849, as published in the binomen *Polycentrus schomburgkii*, is to be given precedence over the name *punctatus* Linnaeus, 1758, as published in the binomen *Labrus punctatus*, whenever the two names are considered to be synonyms.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Labrus* Linnaeus, 1758 (gender: masculine), type species by designation under the plenary power in (1)(a)(i) above *Labrus mixtus* Linnaeus, 1758;

(b) *Cichlasoma* Swainson, 1839 (gender: neuter), type species by designation under the plenary power in (1)(a)(ii) above *Labrus bimaculatus* Linnaeus, 1758;

(c) *Polycentrus* Müller & Troschel, 1849 (gender: masculine), type species by monotypy *Polycentrus schomburgkii* Müller & Troschel, 1849.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *mixtus* Linnaeus, 1758, as published in the binomen *Labrus mixtus* and as defined by the neotype (catalogue no. UUZM 193 in the Uppsala University Zoological Museum) designated by Kullander (1997) (specific name of the type species of *Labrus* Linnaeus, 1758);

(b) *bimaculatus* Linnaeus, 1758, as published in the binomen *Labrus bimaculatus* and as defined by the holotype (catalogue no. NRM 7 in the Swedish Museum of Natural History, Stockholm) (specific name of the type species of *Cichlasoma* Swainson, 1839);

(c) *schomburgkii* Müller & Troschel, 1849, as published in the binomen *Polycentrus schomburgkii* and as defined by the two subadult and 28 juvenile syntypes (catalogue nos. ZMB 1024 and ZMB 20604 in the Museum für Naturkunde der Humboldt-Universität, Berlin), with the endorsement that it is to be given precedence over the name *punctatus* Linnaeus, 1758, as published in the binomen *Labrus punctatus*, whenever the two names are considered to be synonyms;

(d) *punctatus* Linnaeus, 1758, as published in the binomen *Labrus punctatus* and as defined by the lectotype (catalogue no. NRM 4 in the Swedish Museum of Natural History, Stockholm) designated by Kullander (1983), with the endorsement that it is not to be given priority over the name *schomburgkii* Müller & Troschel, 1849, as published in the binomem *Labrus schomburgkii*, whenever the two names are considered to be synonyms.

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:

(a) *ossifagus* Linnaeus, 1758, as published in the binomen *Labrus ossifagus* (a junior objective synonym of *Labrus mixtus* Linnaeus, 1758);

(b) *ossifragus* Lönnberg, 1896, as published in the binomen *Labrus ossifragus* (a junior objective synonym of *Labrus ossifagus* Linnaeus, 1758).

History of Cases 2880 and 2905

Case 2880, which sought the conservation of the specific name of *Polycentrus schomburgkii* Müller & Troschel, 1848, was received from Dr Hans-Joachim Paepke (*Institut für Systematische Zoologie, Museum für Naturkunde der Humboldt-Universität, Berlin, Germany*) on 22 February 1993. After correspondence the case was published in BZN **50**: 215–218 (September 1993). Case 2905, which sought the conservation of *Labrus* Linnaeus, 1758, *Cichlasoma* Swainson, 1839 and *Polycentrus* Müller & Troschel, 1848, was received from Dr R. Fricke (*Staatliches Museum für Naturkunde, Stuttgart, Germany*) and Dr C.J. Ferraris (*California Academy of Sciences, San Francisco, California, U.S.A.*) on 28 September 1993 and, after correspondence, was published in BZN **53**: 106–111 (June 1996). Notice of the cases was sent to appropriate journals.

Case 2905 concerned the designation of type species for two genera of fish, *Labrus* Linnaeus, 1758, the wrasses from the Atlantic and Mediterranean (family LABRIDAE) and *Cichlasoma* Swainson, 1839, cichlids from South America (family CICHLIDAE). Commission action was needed to maintain stability and universality in the usages of these generic names and of *Polycentrus* Müller & Troschel, 1849, leaf fishes from South America (family NANDIDAE or POLYCENTRIDAE).

Under the provisions of the Code the type species of *Cichlasoma* was *Labrus punctatus* Linnaeus, 1758 by monotypy; the name-bearing type of *Labrus* was the nominal species *L. bimaculatus* Linnaeus, 1758 by subsequent designation by Jordan (1891). *Labrus punctatus* was long recognised as composite, being based on Gronovius's (1754) description of a member of the CICHLIDAE, identified by subsequent authors as *Cichlasoma bimaculatum* (Linnaeus, 1758), and on a single specimen in the Museum Adolphi Friderici collection in Stockholm identified as *Polycentrus schomburgkii* Müller & Troschel, 1849 (family NANDIDAE or POLYCENTRIDAE). Swainson's (1839) use of the nominal taxon *Labrus punctata* [sic]

'Bloch, 1792' for the single species on which he based *Cichlasoma* clearly referred to *C. bimaculatum*. However, in 1983 Dr Sven Kullander designated the Stockholm nandid/polycentrid specimen of *L. punctatus* as the lectotype, thereby inadvertently transferring the names *Cichlasoma* and *punctatus* to the NANDIDAE (or POLYCENTRIDAE) and rendering the names senior subjective synonyms of *Polycentrus* and *P. schomburgkii*. The holotype of *L. bimaculatus* was identified (Fernholm & Wheeler, 1983) as a cichlid belonging to *Cichlasoma*; the names *Labrus* and LABRIDAE Bonaparte, [1832] were thus formally senior subjective synonyms of *Cichlasoma* and CICHLIDAE Bleeker, 1859 (para. 4 of the application).

In their application Fricke & Ferraris sought to keep *Labrus punctatus* and *L. bimaculatus* as the type species of *Cichlasoma* and *Labrus* respectively but, by neotype designations, to change the taxonomic meanings of the specific names to conform with the current usages of the generic names. This required that both Kullander's (1983) lectotype designation for *punctatus* and the status of the holotype of *bimaculatus* be set aside.

The comments received on this case all supported action by the Commission to stabilise the usages of the names *Labrus*, *Cichlasoma* and *Polycentrus*, but consistently opposed the procedure followed by Fricke & Ferraris (i.e. the designation of neotypes for *L. punctatus* and *L. bimaculatus*). Comments from Dr Reeve M. Bailey (*Museum of Zoology, University of Michigan, Ann Arbor, Michigan, U.S.A.*) and from Dr Sven Kullander (*Swedish Museum of Natural History, Stockholm, Sweden*) were published in BZN **54**: 106–115 (June 1997); comments from Dr Maurice Kottelat (*Cornol, Switzerland*) and from Mr Alwyne Wheeler (*The Natural History Museum, London, U.K.*) were published in BZN **55**: 237–239 (December 1998). These authors all proposed that, in accord with current and universal understanding of the genera, usage by the majority of authors and the type material, the unambiguous *Labrus mixtus* (defined by the neotype designated by Kullander, 1997) be designated the type species of *Labrus*, and *L. bimaculatus* (defined by the holotype) be designated the type species of *Cichlasoma*.

In **Case 2880** Dr Paepke proposed that the specific name of *Labrus punctatus*, as defined by Kullander's (1983) nandid/polycentrid lectotype, be suppressed in order to conserve the name *Polycentrus schomburgkii* on the grounds that *punctatus* was virtually unused (in either the NANDIDAE/POLYCENTRIDAE or the CICHLIDAE). Paepke's application was supported by Dr Bailey (BZN **54**: 106), but Dr Kullander (BZN **54**: 110–111) considered that suppression of *punctatus* was premature and that, with the present state of knowledge on speciation within *Polycentrus* (family NANDIDAE or POLYCENTRIDAE), both *punctatus* and *schomburgkii* should be retained in the NANDIDAE (or POLYCENTRIDAE). Accordingly, Dr Paepke (BZN **54**: 188–189, September 1997) modified his application to propose that, if the names are considered to be synonyms, *schomburgkii* should be given precedence over *punctatus*, rather than that the latter be suppressed.

In June 1997 copies of the comments by Bailey and Kullander were sent to Drs Fricke and Ferraris with a request for a reply. In September 1999 they were sent copies of both original applications and of all the comments on these two cases. Dr Ferraris's reply, received on 27 November 1999, was quoted on the voting paper: 'When Ronald Fricke and I prepared our application, we recognized that there were two alternative courses of action that would achieve our primary goal of stabilizing

the family names LABRIDAE and CICHLIDAE. Both courses required Commission action. It was our understanding that the only way to begin the process of Commission action was to present the problem, and a workable solution, to the Commission for their consideration. After several rounds of e-mail debate, Fricke and I settled on one solution and prepared our proposal.

It did not come as a surprise that the alternative proposal considered by Fricke and myself was offered in comment. Sven Kullander's critique of our proposal accurately depicted the alternative that Fricke and I previously rejected as somewhat more cumbersome. However, Kullander's suggested alternative does provide an acceptable resolution to my primary concern about the stability of the two family-group names.

Thus, when considering Case 2905, I urge the Commission to place as its top priority the resolution of this unstable situation. If the Commission votes to reject the solution as proposed in Case 2905, then I urge the members to vote immediately to adopt the alternative proposal of Kullander. Simply rejecting Case 2905, without providing a solution to the underlying problem, would unacceptably prolong a problem that Fricke and I first tried to bring to the attention of the Commission in 1993.

It must be noted here that adoption of Kullander's proposal would not necessarily resolve Case 2880. Although the proposal Fricke and I outlined in Case 2905 forced a solution to Case 2880, Kullander's proposal leaves open the possibility that the Commission can accommodate Paepke's (1997) effort to preserve the junior subjective synonym *Polycentrus schomburgkii* Müller & Troschel, 1849 over *Labrus punctatus* Linnaeus, 1758 by using its plenary power to give precedence to the former name'.

Since Cases 2880 and 2905 were interrelated they were submitted together for voting.

Both the courses originally presented by Fricke & Ferraris in Case 2905 (to set aside the original type material of *Labrus bimaculatus* and *L. punctatus* and to designate neotypes to align these nominal species with the current usages of *Labrus* and *Cichlasoma* respectively, set out in BZN **53**: 109), and by Bailey, Kullander, Kottelat and Wheeler in their comments (to designate *L. mixtus* as the type species of *Labrus* and *L. bimaculatus* as the type of *Cichlasoma*, set out comprehensively by Kullander in BZN **54**: 114), required Commission action. These were offered for voting as alternatives (Proposals A and B respectively) in Vote 1.

The revised proposals for Case 2880 (set out in BZN **54**: 188–189) were submitted for voting as Vote 2. Commissioners were asked to vote for or against giving the specific name of *Polycentrus schomburgkii* precedence over *Labrus punctatus* in the NANDIDAE/POLYCENTRIDAE in the event of approval of Proposal B in Vote 1 (a majority for Proposal A would result in removal of *punctatus* from the NANDIDAE/POLYCENTRIDAE).

Decision of the Commission

On 1 December 1999 the members of the Commission were invited to vote as set out above. At the close of the voting period on 1 March 2000 the votes were as follows:

Vote 1. Proposal A (set out in BZN **53**: 109) — 1: Cocks

Proposal B (set out in **54**: 113–114, and in part in BZN **54**: 108–109, proposals (1)(b)(i)-(iii), (2)(a)-(b) and (3)(a)-(b)) — 19: Bock, Bouchet, Brothers, Cogger, Eschmeyer, Heppell, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Papp, Patterson, Ride, Savage, Schuster, Song, Štys.

Dupuis and Kerzhner abstained.

Vote 2. Affirmative votes — 17: Bock, Cocks, Cogger, Eschmeyer, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Papp, Patterson, Ride, Savage, Schuster, Song

Negative votes — 4: Bouchet, Brothers, Heppell and Štys.

Dupuis abstained.

No vote was received from Mawatari.

Lehtinen was on leave of absence.

In relation to Case 2905 (Vote 1), Kerzhner commented: 'In proposal B it is proposed that all previous fixations of type species for *Labrus* and *Cichlasoma* be set aside. It should be recorded, however, that Jordan's (1891) unfortunate type designation was not the earliest for *Labrus*. *Labrus mixtus*, which is now proposed as the type, was designated as such by Chenu (1856, *Encyclopédie d'Histoire Naturelle*, Reptiles et Poissons, p. 266) and, still earlier, Valenciennes (1842, in Cuvier's *Règne animal*, 'Disciples' edition, Poissons, pp. 192 193, pl. 86) designated as type species *Labrus merula* Linnaeus, 1758 by figuring this single species of the genus in the Atlas to the work, which contains in its title the statement 'planches gravées, représentant les types de tous le genres''. In relation to the revised proposals for Case 2880 (Vote 2), Brothers commented: 'I am not convinced that the complexities involved in giving one name (*Polycentrus schomburgkii*) precedence over another (*Labrus punctatus*) are warranted in this case'.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

bimaculatus, *Labrus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 285.

Cichlasoma Swainson, 1839, *The natural history of fishes, amphibians and reptiles, or monocardian animals*, vol. 2, p. 230.

Labrus Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 282.

mixtus, *Labrus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 287.

ossifagus, *Labrus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 286.

ossifragus, *Labrus*, Lönnberg, 1896, *Bihang till Kongliga Svenska Vetenskapa-Akademiens Handlingar*, **22**(4, 1): 42.

Polycentrus Müller & Troschel, 1849, Fische *in* Schomburgk, M.R., *Reisen in Britisch-Guiana in den Jahren 1840–1844* ..., part 3 (*Versuch einer Zusammenstellung der Fauna und Flora von Britisch-Guiana*), no. 1 (Fauna), p. 622.

punctatus, *Labrus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 285.

schomburgkii, *Polycentrus*, Müller & Troschel, 1849, Fische *in* Schomburgk, M.R., *Reisen in Britisch-Guiana in den Jahren 1840 1844* ..., part 3 (*Versuch einer Zusammenstellung der Fauna und Flora von Britisch-Guiana*), no. 1 (Fauna), p. 622.

The following is the reference for the designation of the lectotype of *Labrus punctatus* Linnaeus, 1758:

Kullander, S.O. 1983. *A revision of the South American cichlid genus* Cichlasoma *(Teleostei: Cichlidae)*, p. 84.

The following is the reference for the designation of the neotype of *Labrus mixtus* Linnaeus, 1758:

Kullander, S.O. 1987. BZN **54**: 113.

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The Bulletin of Zoological Nomenclature

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 57, part 3 (pp. 137–196) 29 September 2000

Notices

(a) *Invitation to comment*. The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles*. At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications*. The following new applications have been received since going to press for volume 57, part 2 (published on 30 June 2000). Under Article 82 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Helix lucorum* Linnaeus, 1758 and *H. punctata* Müller, 1774 (currently *Otala punctata*; Mollusca, Gastropoda): proposed conservation of usage of the specific names by the designation of a neotype for *H. lucorum*. (Case 3158). C. Van Osselaer, F. Chérot, B. Tursch & T. Backeljau.

(2) *Staphylinus maculosus* and *S. violaceus* Gravenhorst, 1802 (currently *Platydracus maculosus* and *P. violaceus*; Insecta, Coleoptera): proposed conservation of usage of the specific names. (Case 3159). A.F. Newton.

(3) *Cretolamna* Glickman, 1958 (Chondrichthyes, Lamniformes): proposed confirmation as the correct original spelling. (Case 3161). H. Cappetta.

(4) *Ceratichthys micropogon* Cope, 1865 (currently *Nocomis micropogon*; Osteichthyes, Cypriniformes): proposed conservation of the specific name by the designation of a neotype. (Case 3162). J.S. Nelson et al.

(5) *Holacanthus ciliaris bermudensis* Goode, 1876 (currently *Holacanthus bermudensis*; Osteichthyes, Perciformes): proposed conservation of the subspecific name by the designation of a neotype. (Case 3163). J.S. Nelson et al.

(6) *Kalotermes* Hagen, 1853 (Insecta, Isoptera): proposed designation of *Termes flavicollis* Fabricius, 1793 as the type species. (Case 3164). M.S. Engel & K. Krishna.

(7) *Parasuchus hislopi* Lydekker, 1885 (Reptilia, Archosauria): proposed replacement of the lectotype by a neotype. (Case 3165). S. Chatterjee.

(8) *Campanularia noliformis* McCrady, 1859 (currently *Clytia noliformis*; Cnidaria, Hydrozoa): proposed conservation of the specific name by the designation of a neotype. (Case 3166). A. Lindner & D.R. Calder.

(9) *Schistochlamys* Reichenbach, 1850 and *Neothraupis* Hellmayr, 1936 (Aves, Passeriformes): proposed conservation. (Case 3167). S.M.S. Gregory.

(d) *Rulings of the Commission*. Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin*.

The International Code of Zoological Nomenclature

The new and extensively revised 4th Edition of the *International Code of Zoological Nomenclature* was published in August 1999 and came into effect on 1 January 2000; it entirely supersedes the 3rd (1985) edition. Some notes about the new edition, which contains many new provisions, will be found on the Commission's Website (www.iczn.org).

The price of the 4th Edition is £40 or $65; the following discounts are offered:

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The Official Lists and Indexes of Names and Works in Zoology (1987) — reduced from £60 to £30 and from $110 to $55;

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The Bulletin of Zoological Nomenclature (the Commission's quarterly journal) — discount valid for up to 5 years; for 2000 the discounted price would be £55 or $100.

The Code is published in a bilingual volume (English and French). Official texts in a number of other languages are planned and their availability will be announced on the Commission's Website. The Spanish text has been published; details from e-mail: mcnb168@mncn.csic.es, fax (+34) 915645078.

The linguistic appendices in the 3rd Edition have not been included in the new edition; copies of these may be obtained without charge from ITZN.

Case 3166

Campanularia noliformis McCrady, 1859 (currently *Clytia noliformis*; Cnidaria, Hydrozoa): proposed conservation of the specific name by the designation of a neotype

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Abstract. The purpose of this application is to conserve the name *Clytia noliformis* (McCrady, 1859) for a well-known marine hydroid (family CAMPANULARIIDAE). McCrady's (1859) type material of *C. noliformis* is lost but the hydroid he described is now believed to have been a different species from *C. noliformis* auct. and perhaps conspecific with *C. hemisphaerica* (Linnaeus, 1767). It is proposed that a neotype be designated for *C. noliformis* in accord with usage during the past 100 years. The species *noliformis* as currently understood occurs circumtropically and is common on pelagic *Sargassum* and benthic substrates.

Keywords. Nomenclature; taxonomy; Cnidaria; Hydrozoa; CAMPANULARIIDAE; hydroids; medusae; *Clytia noliformis*; *Clytia hemisphaerica*.

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1. McCrady (1859, p. 194) established the name *Campanularia noliformis* for the immature medusa and hydroid stages of a hydrozoan species from Charleston Harbor, South Carolina. The specific name is now generally combined with *Clytia* Lamouroux, 1812 (p. 184). The type material of *Clytia noliformis* is lost, probably having been destroyed during the American Civil War. None of McCrady's material has been found at the Charleston Museum (see Calder, 1983, pp. 10, 24) and none has been located at the Museum of Comparative Zoology, Harvard University, where McCrady was employed from 1873 to 1876 (see Calder, 1991, p. 67). No previous neotype designation has been made.

2. The original description of *Clytia noliformis* by McCrady (1859), which included an illustration (pl. 11, fig. 4) of a young medusa, provides little basis for differentiation of the species from several others of the genus. Based on current evidence it seems unlikely that McCrady's species and the hydrozoan known today as *C. noliformis* are the same species. One of us (Calder, 1991, p. 67) noted that

McCrady's description of the hydroid, including the gonotheca, more closely resembles *Clytia hemisphaerica* (Linnaeus, 1767, p. 1098, published as *Medusa hemisphaerica*) than *C. noliformis* auct. Moreover, in Charleston Harbor, South Carolina (the type locality of *C. noliformis*) hydroids corresponding with *C. hemisphaerica* (Linnaeus, 1767) were common to abundant in collections made between 1973–1981, often on the same substrates noted by McCrady (1859) for *C. noliformis* (see Calder, 1991, p. 67). *Clytia noliformis* auct. was never found in those collections.

3. Misuse of the name *Clytia noliformis* is long standing. Misidentification of McCrady's (1859) species, and misapplication of the name to the species of *Clytia* abundant on pelagic *Sargassum* in the North Atlantic, took place early in the 20th century (see Nutting, 1901, 1915; Wallace, 1909; Kingsley, 1910; Fraser, 1912, Stechow, 1925). The name *C. noliformis* has since been applied to a well-known hydroid species, also found on benthic macroalgae and invertebrates, differing from *C. hemisphaerica* in the shape of its hydrothecae and gonothecae, and probably different from that observed by McCrady (1859) (see, for example, Fraser, 1943, 1947; Mammen, 1965; Rees & Thursfield, 1965; Rees & White, 1966; Boero, 1981; Spracklin, 1982; Niermann, 1986; Calder, 1986, 1991, 1995, 1998; Stachowicz & Lindquist, 1997. A list of a further seven references demonstrating the current usage of *C. noliformis* is held by the Commission Secretariat).

4. Recognition of McCrady's species as *Clytia hemisphaerica* (Linnaeus, 1767) would mean the loss of the name *C. noliformis* as a junior synonym, and a new name would be needed for the taxon currently known as *C. noliformis*, resulting in confusion in the use of names. No synonym is available as a substitute name for *C. noliformis* auct. (see Calder, 1991, pp. 65, 68). Another name applied to the species, *Clytia simplex* Congdon, 1907 (p. 471), is an invalid junior secondary homonym of *Clytia simplex* (Browne, 1902, p. 282, published as *Phialidium simplex*). *Epenthesis folleata* McCrady, 1859 (p. 191), considered identical or questionably so with *C. noliformis* by some authors (see Brooks, 1883, p. 138; Vannucci Mendes, 1946, p. 549; West & Renshaw, 1970, p. 332), seems closer to *Clytia gracilis* (M. Sars, 1850, p. 138, published as *Laomedea gracilis*) or to *C. hemisphaerica* than to *C. noliformis* auct. (see Calder, 1991, p. 68). Reasons for not using other names were also provided by Calder (1991, p. 68).

5. In 1991 one of us (Calder, pp. 65, 68) recorded that an application to the Commission was required to conserve the widespread use of the name *Clytia noliformis* (McCrady, 1859). We propose the stabilization of the name in its current meaning by the designation of a neotype. In accord with Article 72.5.2 of the Code, the proposed neotype is a fertile hydroid colony deposited in the Centre for Biodiversity and Conservation Biology at the Royal Ontario Museum, Toronto, Canada, collection number ROMIZ B365. It was collected in Castle Harbour, Bermuda, on a dead octocoral, by Dale Calder on 1 October 1986. The hydroid colony is accompanied by 35 one-day-old medusae, released from the hydroid in the laboratory. Parts of the hydroid colony of the proposed neotype, as well as accompanying medusa stages, were illustrated by Calder (1991, p. 66, figs. 36a, d, e and f).

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all previous fixations of type specimens for the nominal species *Campanularia noliformis* McCrady, 1859 and to designate as neotype the hydroid colony, collection no. ROMIZ B365, described in para. 5 above;

(2) to place on the Official List of Specific Names in Zoology the name *noliformis* McCrady, 1859, as published in the binomen *Campanularia noliformis* and as defined by the neotype designated in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3146

Valvata minuta Draparnaud, 1805 (currently *Hauffenia*, *Neohoratia* or *Islamia minuta*; Mollusca, Gastropoda): proposed replacement of the lectotype by a neotype

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Abstract. The purpose of this application is to conserve the current usage and understanding of the specific name of *Hauffenia* (or *Neohoratia* or *Islamia*) *minuta* (Draparnaud, 1805) for a small, valvatiform, freshwater prosobranch mollusc (family HYDROBIIDAE) from central Europe. At present the species is typified by a lectotype of uncertain identity, and it is proposed that this be replaced with a neotype which accords with the established understanding of the species.

Keywords. Nomenclature; taxonomy; Gastropoda; prosobranchs; HYDROBIIDAE; Europe; *Hauffenia minuta*; *Neohoratia minuta*; *Islamia minuta*.

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1. The nominal species *Valvata minuta* Draparnaud, 1805 (p. 42, pl. 1, figs. 36–38) was the first established for a group of very small, valvatiform shelled, freshwater hydrobiid prosobranch gastropods. The group has had a complex taxonomic history (Bodon, Manganelli & Giusti, in press). The identity of *V. minuta* has been the subject of controversy because the original description and illustrations have not enabled subsequent unambiguous identification. Draparnaud did not mention a locality or specimens.

2. Following Draparnaud's death, his heirs sold his mollusc collection in 1820 to the Naturhistorisches Museum in Vienna. In 1894 Locard studied Draparnaud's collection and in 1895 (pp. 20, 46–47) recorded that the type material of *Valvata minuta* consisted of two shells in Vienna and a third shell that had been donated to the collection of Bischof von Hohenwarth. The fate of the latter specimen is unknown, but the specimens in Vienna are extant, catalogue no. 1820/xxvi/21. Some years ago they were studied by Binder (1966), who demonstrated that they belonged to two different species. One of them, represented by a whole shell which Binder (1966, fig. 1) designated as the 'type', is a prosobranch hydrobiid species (reported as *Hauffenia minuta*); the other, represented by a fragment of the apex of a shell, is a heterobranch valvatid species (*Valvata piscinalis* Müller, 1774).

3. Bernasconi (1975) published the first redescription of *Hauffenia minuta* based on a study of some Swiss and French populations. He discussed three geographical 'subspecies', including *Hauffenia minuta minuta* (Draparnaud, 1805) and *H. m. globulina* (Paladilhe, 1866, published as *Valvata globulina* from the Garonne basin). Bernasconi was aware of the lectotype designation by Binder (1966) but his nominotypical subspecies has the anatomy of *V. globulina*, and the locality he gave

for the latter (Vidourle, Sauve, Gard), and not that that he gave for *H. minuta minuta* (Areuse, St Sulpice), was cited as the type locality of the species. Both these localities are outside the ranges reported by the authors of the two taxa. In fact, that given by Bernasconi (1975) for *H. m. minuta* is in the Swiss canton of Neuchâtel (territory of the King of Prussia before 1815) and not in France; that given for *H. m. globulina* is in the Rhone and not in the Garonne basin. Bernasconi (1975, p. 304) mentioned a 'nouveau typoïde' for *H. minuta*, but this did not relate to a particular specimen and would not be a valid neotype designation even if original material did not exist.

4. Study of the lectotype of *Valvata minuta* designated by Binder (1966) does not enable the species to be identified with certainty. It has a shell shape similar to material currently known as *Islamia minuta* from the Jura but differs by a shorter shell. On the basis of shell size (height 0.60 mm, diameter 1.34 mm), it is more similar to '*Horatia*' *exilis* (Paladilhe, 1867), from the department of Hérault, differing only in that the last whorl is not dilated near the aperture (Bodon, Manganelli & Giusti, in press, have provided a redescription of '*Horatia*' *exilis* and assigned *V. minuta* and *V. globulina*, as distinct species, to the genus *Islamia* Radoman, 1973).

5. No locality data is reported on the labels accompanying the type material of *H. minuta* in Draparnaud's collection at the Naturhistorisches Museum in Vienna. It must therefore be assumed that the type locality can only be cited as 'France', as given in the title of Draparnaud's (1805) work (*Histoire naturelle des mollusques terrestres et fluviatiles de la France*). If Draparnaud collected this material near Montpellier, the town where he lived, then his *V. minuta* cannot be the species it is currently understood to be because this lives much further north, but it may be '*Horatia*' *exilis*.

6. In this uncertain situation, we propose that the type status of the lectotype of *Valvata minuta* kept in the Draparnaud Collection in Vienna (specimen no. 1820/xxvi/21) be set aside and that a neotype be designated for this species, allowing clarification of its taxonomic status and conservation of the name in its current sense. Recent representative publications demonstrating the current usage of *Hauffenia minuta* are Bernasconi (1977, 1985 and 1986), Bole & Velkovrh (1986), Bouchet (1990) and Boeters (1998). The proposed neotype (a shell) was collected at Source de l'Ain, Nozeroy, Jura. It was chosen from a population which is already anatomically known (see Bernasconi, 1975) and which has been restudied, and which lives in a major spring of the French Jura where no other similar *Islamia* species lives. It is deposited in the Naturhistorisches Museum, Vienna (catalogue no. 100485) and a complete description and illustration of the proposed neotype is given by Bodon, Manganelli & Giusti (in press).

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all previous type fixations for the nominal species *Valvata minuta* Draparnaud, 1805 and to designate as neotype the specimen no. 100485 in the Naturhistorisches Museum in Vienna;

(2) to place on the Official List of Specific Names in Zoology the name *minuta* Draparnaud, 1805, as published in the binomen *Valvata minuta* and as defined by the neotype designated in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3123

DOLICHOPODINI Brunner von Wattenwyl, 1888 (Insecta, Grylloptera): proposed emendation of spelling to DOLICHOPODAINI, so removing the homonymy with DOLICHOPODIDAE Latreille, 1809 (Insecta, Diptera)

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Abstract. The family-group name DOLICHOPODINI Brunner von Wattenwyl, 1888 (Insecta, Grylloptera) is a junior homonym of DOLICHOPODIDAE Latreille, 1809 (Insecta, Diptera). Both names are currently in use and refer, respectively, to a group of Palaearctic wingless camel crickets or cave crickets, and a large family of about 6000 species of long-legged flies with a world wide distribution in most habitats. It is proposed that the homonymy be removed by changing the spelling of the gryllopteran family-group name to give DOLICHOPODAINI by emending the stem of the name of the type genus *Dolichopoda* Bolivar, 1880, while leaving the dipteran name (based on *Dolichopus* Latreille, 1796) unchanged. The names *Dolichopus* Latreille, 1796 and DOLICHOPODIDAE Latreille, 1809 were placed on Official Lists in Direction 49 (November 1956).

Keywords. Nomenclature; taxonomy; Diptera; Grylloptera; DOLICHOPODIDAE; DOLICHOPODAINI; *Dolichopus*; *Dolichopoda*; long-legged flies; camel crickets; cave crickets.

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1. The dipteran family name DOLICHOPODIDAE was first established by Latreille (1809, pp. 239, 290) as DOLICHOPODES, based on the genus *Dolichopus* Latreille, 1796 (p. 159). In Direction 49 (November 1956) the Commission placed DOLICHOPODIDAE Latreille on the Official List, recording Loew (1862, p. 32) as the first author to publish the name in the correct form. However, Sabrosky, Thompson & Evenhuis (1999, p. 117) have recently noted that Latreille's (1809) family name was, in fact, first correctly spelled by Agassiz (1846, p. 128) as DOLICHOPODIDAE. The homonymy of the dipteran family name with DOLICHOPODINI Brunner von Wattenwyl, 1888 in Grylloptera was not considered in Direction 49 (see paras. 4 and 5 below).

2. Latreille (1796) established the genus *Dolichopus* without included species. In 1802 (pp. 439–440) he placed two species in the genus and in 1810 (p. 443) he designated one of these, *Dolichopus ungulatus* 'Fab.' (actually, Linnaeus, 1758), as the type species. The generic name *Dolichopus* and the specific name of *Musca ungulata* Linnaeus, 1758 were also placed on Official Lists in Direction 49. The names *Dolichopus* and *D. ungulatus* refer to long-legged flies.

3. The dipteran family is large, about 6000 species, with a world wide distribution in most habitats, especially those near water or moist areas. The family-group name DOLICHOPODIDAE has been widely and consistently used in the entomological literature. Significant representative publications include Foote, Coulson & Robinson (1965), Robinson (1970a, 1970b), Dyte (1975), Dyte & Smith (1980), Robinson & Vockeroth (1981), Ulrich (1981) and Bickel & Dyte (1986). Negrobov (1987, 1991) divided the subfamily DOLICHOPODINAE into the tribes DOLICHOPODINI and TACHYTRECHINI.

4. The gryllopteran name DOLICHOPODINI was established by Brunner von Wattenwyl (1888, p. 256), as DOLICHOPODAE, for a tribe of Palearctic rhaphidophorids (wingless camel crickets or cave crickets). Karny (1929, p. 64) emended the spelling to DOLICHOPODINI. The tribal name was based on the genus *Dolichopoda* Bolivar, 1880 (p. 72), which was erected for the single species *Gryllus* (*Tettigonia*) *palpata* Sulzer, 1776 (p. 83, pl. 9, fig. 2) from Sicily. The tribal name DOLICHOPODINI has been used in publications by Chopard (1931) and Hubbell (1936). Beier (1955) adopted DOLICHOPODINAE at the subfamily level and this has been followed by Harz (1969) and Hubbell & Norton (1978). The gryllopteran family-group name has been used in several recent publications; these include Vickery & Kevan (1983), Willemse (1984), Caccone & Powell (1987), Sbordoni et al. (1987) and Allegrucci, Caccone, Cesaroni & Sbordoni (1992).

5. The family-group names established by Latreille (1809) and Brunner von Wattenwyl (1888) are homonyms under Article 53.1 of the Code. Sabrosky, Thompson & Evenhuis (1999) pointed out that family-group names based on *Dolichopoda* Bolivar, 1880 are homonyms of those based on the 'very distinct genus *Dolichopus*' in Diptera, and that the latter 'are much older'. Both family-group names are currently in use and we propose that the homonymy be removed by emending the stem of the junior name from DOLICHOPOD- to DOLICHOPODA-, thereby changing the gryllopteran family-group name to DOLICHOPODAINI, while leaving the dipteran name (DOLICHOPODIDAE Latreille, 1809) unaltered.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to rule that for the purposes of Article 29 of the Code the stem of the generic name *Dolichopoda* Bolivar, 1880 (Grylloptera) is DOLICHOPODA-;

(2) to place on the Official List of Generic Names in Zoology the name *Dolichopoda* Bolivar, 1880 (gender: feminine), type species by monotypy *Gryllus* (*Tettigonia*) *palpata* Sulzer, 1776 (Grylloptera);

(3) to place on the Official List of Specific Names in Zoology the name *palpata* Sulzer, 1776, as published in the binomen *Gryllus* (*Tettigonia*) *palpata* (specific name of the type species of *Dolichopoda* Bolivar, 1880) (Grylloptera);

(4) to emend the entry on the Official List of Family-Group Names in Zoology for the name DOLICHOPODIDAE Latreille, 1809 to record that it was first published in the correct form by Agassiz (1846) (Diptera);

(5) to place on the Official List of Family-Group Names in Zoology the name DOLICHOPODAINI Brunner von Wattenwyl, 1888, type genus *Dolichopoda* Bolivar, 1880 (spelling emended by the ruling in (1) above) (Grylloptera);

(6) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name DOLICHOPODINI Brunner von Wattenwyl, 1888 (spelling emended to DOLICHOPODAINI by the ruling in (1) above) (Grylloptera).

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Case 3041

Cynodon Spix in Spix & Agassiz, 1829 and *Rhaphiodon* Agassiz in Spix & Agassiz, 1829 (Osteichthyes, Characiformes): proposed conservation, and proposed designation of *C. gibbus* and *R. vulpinus* Spix & Agassiz, 1829 as the respective type species of *Cynodon* and *Rhaphiodon*

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Abstract. The purpose of this application is to stabilize the usage of the names *Cynodon* Spix in Spix & Agassiz, 1829 and *Rhaphiodon* Agassiz in Spix & Agassiz, 1829 for two genera of South American freshwater characoid fish (CYNODONTIDAE or CHARACIDAE, CYNODONTINAE). The early history of the names is complex and a number of interpretations have been put forward. It is proposed that *Cynodon gibbus* Spix & Agassiz, 1829 be designated the type species of *Cynodon*, that *R. vulpinus* Spix & Agassiz, 1829 be designated as the type species of *Rhaphiodon*, and that, if their type species are considered to be congeneric, *Rhaphiodon* be given precedence over *Cynodon*.

Keywords. Nomenclature; taxonomy; Osteichthyes; Characiformes; CYNODONTIDAE; CHARACIDAE; *Cynodon*; *Rhaphiodon*; *Cynodon gibbus*; *Cynodon vulpinus*; *Rhaphiodon gibbus*; *Rhaphiodon vulpinus*; freshwater fish; South America.

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1. In 1829 Louis Agassiz completed the work on marine and freshwater Brazilian fishes begun by Johann Baptist von Spix, who died in 1826. The work was published in two parts, the first between 22 May and 4 July 1829, and the second in January 1831 (see Whitehead & Myers, 1971 and Kottelat, 1988). During the 1817–1820 zoological and botanical expedition to Brazil, Spix was responsible for the collection of fish specimens and supervised most of the drawings; in part 1 a number of plates bear generic and specific names assigned by him. Agassiz wrote the whole of the text; he did not always adopt Spix's names which were on the plates and in the text provided replacement names of his own. The names used in the text and plates of the second part are the same, having been assigned by Agassiz after Spix's death. The specimens collected by Spix (except those later given to Agassiz) were housed in the Zoologische Staatssammlung in Munich until destroyed in April 1944 by bombing; those of several species described by Agassiz are housed in the Musée d'Histoire Naturelle de Neuchâtel (see Kottelat, 1988).

2. The second edition of Cuvier's *Règne animal*, which included descriptions of several new fish taxa, appeared not later than 31 March 1829 (see Boeseman, 1962, p. 80), and thus has two to three months priority over the first part of Spix & Agassiz's (1829) work (see also Whitehead & Myers, 1971 and Kottelat, 1988). Cuvier had seen Spix's unpublished plates and used several of Spix's names, either as valid names or in synonymy.

3. Agassiz (Spix & Agassiz, 1829, pp. 59, 76) provided the description of the genus *Rhaphiodon* and included two nominal species, *R. vulpinus* and *R. gibbus*, for which he also provided descriptions (pp. 76 78). The plates by Spix that accompanied the descriptions were labeled *Cynodon vulpinus* (pl. xxvi) and *Cynodon gibbus* (pl. xxvii). The name *Cynodon* is attributed to Spix in the text by Agassiz (p. 76), and is there treated as a synonym of his own name *Rhaphiodon*; *Cynodon* is available from Spix's plates under Article 12.2.7 of the Code. Agassiz (1829, p. 76, footnote) justified the establishment of his replacement name *Rhaphiodon* for Spix's *Cynodon* because the name *Cynodon* had already been used in botany.

4. Before the publication of Spix & Agassiz (1829) Cuvier (1829, before 31 March) had introduced the generic name *Cynodon* in conjunction with the description of the genus *Hydrocyon*. Footnote no. 4 in Cuvier (p. 312) stated [with Cuvier's bibliographic abbreviations and punctuation unaltered]: 'Autre espèce du Brésil *Hydroc. scomberöides*, Cuv., Mém. Mus., V, pl. xxvii, f. 2, ou *Cynodon vulpinus*, Spix, xxvi; — *Cynodon gibbus*, id., xxvii'. The Spix plates cited in combination with the species names *vulpinus* and *gibbus* had not, however, been published at that time. In Opinion 1581 (March 1990) *Hydrocyon scomberoides* Cuvier, 1819 was confirmed as the type species of *Hydrolycus* Müller & Troschel, 1844, but the status of the names *Cynodon* and *C. vulpinus* was not then considered.

5. Whitehead & Myers (1971, p. 489) reproduced Cuvier's above footnote, but its significance has been ignored by authors (see para. 6 below) who have addressed the status of *Cynodon* and *Rhaphiodon*. Whitehead & Myers provided generalized instructions (pp. 494–495) on how to solve the nomenclatural problems arising from the works of Cuvier (1829) and Spix & Agassiz (1829), and Weitzman (1996) recommended that these matters be referred to the Commission.

6. Authors such as Campos (1945), Travassos (1946), Kottelat (1988), Eschmeyer (1990, 1998), Eschmeyer & Bailey (1990) and Géry, Le Bail & Keith (1999) have arrived at different conclusions regarding *Cynodon* and *Rhaphiodon*, and in some cases additional generic names have been established for species associated with these genera, for example *Rhaphiodontichthys* Campos, 1945 (p. 473; type species *Cynodon vulpinus*) and *Camposichthys* Travassos, 1946 (p. 132; type species *Cynodon gibbus*). The latter names have seldom been adopted (see Mago-Leccia, 1970, p. 30 and Machado-Allison, 1987, p. 134 for usage of *Rhaphiodontichthys*).

7. The species denoted by the names *vulpinus* and *gibbus* have been considered congeneric by some authors and placed either in the genus *Rhaphiodon* (see, for example, Müller & Troschel, 1844, p. 93; Géry, 1977, p. 302; Géry & Poivre, 1979; Mendes dos Santos, Jégu & Merona, 1984, p. 40; Galvis, Mojica & Rodríquez, 1989, p. 122; and Taphorn, 1992, pp. 436–439) or in *Cynodon* (see Valenciennes, 1849, p. 329; Kner, 1859, p. 54; and Günther, 1864, p. 358). When, as has been more often the case, they are placed in different genera, *vulpinus* is placed in *Rhaphiodon*

and *gibbus* in the genus *Cynodon* (see Fowler, 1906, p. 467, 1950, p. 330, 1975, p. 277; Eigenmann, 1910, p. 444; Jordan, 1923, p. 134; Eigenmann & Allen, 1942, p. 271; Nelson, 1949; Schultz, 1950, p. 47; Lowe McConnel, 1964, p. 110; Nielsen, 1974, p. 45; Howes, 1976, p. 207; Lesiuk & Lindsey, 1978; Goulding, 1980, p. 184; Géry, 1986, p. 63; Ortega & Vari, 1988, p. 10; Ferreira, Mendes dos Santos & Jégu, 1988, p. 344; Goulding, Carvalho & Ferreira, 1988, p. 127; Barriga, 1991, p. 30; Planquette, Keith & Le Bail, 1996, p. 212; Lucena & Menezes, 1998 and Toledo-Piza, 2000).

8. Our interpretations and conclusions, based on the facts cited above and the Code, are as follows:

(a) Cuvier wrongly considered *Cynodon vulpinus* to be the same species as *Hydrocyon scomberoides*, as shown (see para. 4 above) by the word 'ou' [or] in his footnote. *C. gibbus* was listed as an additional species to be included in the *scomberoides* group, but, as it was not accompanied by a description and Spix's plate had not then been published, the name *gibbus* is not available from Cuvier's work.

(b) The generic and specific names of *Cynodon vulpinus* were published by Cuvier as synonyms (of *Hydrocyon scomberoides*), but because they were used as valid by many authors prior to 1961 (see paras. 6 and 7 above) they became retrospectively available from Cuvier (1829) when Article 11.6.1 was introduced into the Code in 1964 (then as Article 11d). The type species of *Cynodon* Cuvier is *C. vulpinus* (Article 67.12). However, the name *Cynodon vulpinus* has rarely been attributed to Cuvier and we propose (para. 10 below) that *Cynodon* should be attributed to Spix in Spix & Agassiz (1829) and *vulpinus* should be attributed to Spix & Agassiz jointly; it appeared in the text (p. 76) in combination with *Rhaphiodon* and on pl. xxvi and p. 77 in combination with *Cynodon*.

(c) The specific name *gibbus* should similarly be attributed to Spix & Agassiz jointly; it appeared in the text (p. 77) in combination with *Rhaphiodon* and on pl. xxvii and p. 78 in combination with *Cynodon*.

(d) The generic name *Rhaphiodon* was proposed by Agassiz (p. 76) as a replacement name (see para. 3 above) for Spix's *Cynodon*. This being so, under Article 67.8 *Rhaphiodon* would automatically have the same type species as *Cynodon*, but we propose that *Rhaphiodon* Agassiz should be deemed to be a distinct genus with its own type species.

(e) Because *vulpinus* has usually been placed in *Rhaphiodon* and *gibbus* in *Cynodon* (see para. 7 above), we propose that *R. vulpinus* should be designated as the type species of *Rhaphiodon* and *C. gibbus* as that of *Cynodon* (as had been designated, although invalidly, by Eigenmann, 1910, p. 444).

9. In accord with Agassiz's own first reviser action (Article 24.2 of the Code; see p. 2 of the "Conspectus Piscium Brasiliensium", published in Spix & Agassiz, 1831) and with modern usage (see para. 7 above), we propose that when their type species are considered to be congeneric the name *Rhaphiodon* should take precedence over *Cynodon*.

10. The names CYNODONTIDAE and CYNODONTINAE date from Eigenmann (1907, p. 154), the corresponding names based on *Rhaphiodon* from Travassos (1946). CYNODONTINAE (or CYNODONTIDAE) have been used more often than the corresponding names based on *Rhaphiodon*, especially in recent revisionary works (see Lucena & Menezes, 1998; Géry, Le Bail & Keith, 1999; Toledo-Piza, 2000).

11. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to suppress the following names for the purposes of both the Principle of Priority and the Principle of Homonymy:
   (a) *Cynodon* Cuvier, 1829 and all uses of the name *Cynodon* prior to the publication of *Cynodon* Spix in Spix & Agassiz, 1829;
   (b) *vulpinus* Cuvier, 1829, as published in the binomen *Cynodon vulpinus*, and all uses of the name *Cynodon vulpinus* prior to the publication of *Cynodon vulpinus* Spix & Agassiz, 1829;

(2) to rule that the name *Rhaphiodon* Agassiz in Spix & Agassiz, 1829 is to be treated as the name of a new genus and not as a replacement name for *Cynodon* Spix in Spix & Agassiz, 1829;

(3) to rule that the generic name *Rhaphiodon* Agassiz in Spix & Agassiz, 1829 is to be given precedence over *Cynodon* Spix in Spix & Agassiz, 1829 whenever their type species are considered to be congeneric;

(4) to set aside all previous type species fixations for the following nominal genera:
   (a) *Cynodon* Spix in Spix & Agassiz, 1829 and to designate *Cynodon gibbus* Spix & Agassiz, 1829 as the type species;
   (b) *Rhaphiodon* Agassiz in Spix & Agassiz, 1829 and to designate *Rhaphiodon vulpinus* Spix & Agassiz, 1829 as the type species;

(5) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Cynodon* Spix in Spix & Agassiz, 1829 (gender: masculine), type species by designation under the plenary power in (4)(a) above *Cynodon gibbus* Spix & Agassiz, 1829, with the endorsement that it is not to be given priority over the name *Rhaphiodon* Agassiz in Spix & Agassiz, 1829 whenever their type species are considered to be congeneric;
   (b) *Rhaphiodon* Agassiz in Spix & Agassiz, 1829 (gender: masculine), type species by designation under the plenary power in (4)(b) above *Rhaphiodon vulpinus* Spix & Agassiz, 1829, with the endorsement that it is to be given precedence over the name *Cynodon* Spix in Spix & Agassiz, 1829 whenever their type species are considered to be congeneric;

(6) to place on the Official List of Specific Names in Zoology the following names:
   (a) *gibbus* Spix & Agassiz, 1829, as published in the binomen *Cynodon gibbus* (specific name of the type species of *Cynodon* Spix in Spix & Agassiz, 1829);
   (b) *vulpinus* Spix & Agassiz, 1829, as published in the binomen *Rhaphiodon vulpinus* (specific name of the type species of *Rhaphiodon* Agassiz in Spix & Agassiz, 1829);

(7) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
   (a) *Cynodon* Cuvier, 1829 (suppressed in (1)(a) above);
   (b) *Rhaphiodontichthys* Campos, 1945 (a junior objective synonym of *Rhaphiodon* Agassiz in Spix & Agassiz, 1829);
   (c) *Camposichthys* Travassos, 1946 (a junior objective synonym of *Cynodon* Spix in Spix & Agassiz, 1829);

(8) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *vulpinus* Cuvier, 1829, as published in the binomen *Cynodon vulpinus* and as suppressed in (1)(b) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3136

Crotaphytus vestigium Smith & Tanner, 1972 (Reptilia, Squamata): proposed conservation of the specific name

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Abstract. The purpose of this application is to conserve the specific name of *Crotaphytus vestigium* Smith & Tanner, 1972 for an iguanian lizard (family CROTAPHYTIDAE from Baja California, Mexico and southern California, U.S.A. The name is a junior synonym of the invalid *Crotaphytus fasciatus* Mocquard, 1899 and the replacement name *C. fasciolatus* Mocquard, 1903. The specific name of *C. fasciolatus* has been treated as a junior synonym of *C. wislizenii* Baird & Girard, 1852 (currently *Gambelia wislizenii*) and has never been used for the species for which it was established. It is proposed that the name *C. fasciolatus* Mocquard, 1903 be suppressed.

Keywords. Nomenclature; taxonomy; Reptilia; Squamata; CROTAPHYTIDAE; *Crotaphytus fasciolatus*; *Crotaphytus vestigium*; Mexico; California.

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1. In 1899 Mocquard (p. 303, pl. 13, fig. 1) described and illustrated the iguanian lizard *Crotaphytus fasciatus* from a juvenile specimen collected at Cerro Las Palmas, Baja California, Mexico. However, the name *Crotaphytus fasciatus* Mocquard, 1899 is a junior primary homonym of *Crotaphytus fasciatus* Hallowell, 1853 (p. 207), which itself is a junior synonym of *Crotaphytus wislizenii* Baird & Girard, 1852 (p. 69; see Cope, 1900, p. 257). *Crotaphytus wislizenii* has since been placed in the genus *Gambelia* Baird, 1858 (see Smith, 1946, p. 158; McGuire, 1996, p. 2).

2. Realizing that his name *Crotaphytus fasciatus* was invalid, Mocquard (1903, p. 209) established the replacement name *Crotaphytus fasciolatus*.

3. Smith & Tanner (1972, p. 29, figs. 1 and 2) described *Crotaphytus insularis vestigium* based on an adult male, no. 23338 at Brigham Young University, Provo, Utah, collected at Guadeloupe Canyon, Juarez Mountains, Baja California in 1965. The name *vestigium* has since been used at species level (see Collins, 1991, p. 43). It is clear from Mocquard's (1899) description and the accompanying figure that the taxon which he named *C. fasciatus* (and in 1903, *C. fasciolatus*) and *C. vestigium* are conspecific (see McGuire, 1996, p. 97). Thus, *C. fasciolatus* has priority over *C. vestigium*. However, since the initial description of *C. fasciatus* in 1899 and establishment of the replacement name *C. fasciolatus* in 1903, virtually every author that has cited these names has treated them as junior synonyms of *Gambelia wislizenii* (Baird & Girard, 1852) (see, for example, Van Denburgh, 1922; Smith & Taylor, 1950; Tanner & Banta, 1963), and the name *fasciolatus* has not been used as valid for the species for which it was originally intended during the 97 years that have since passed. Only Schmidt (1922, p. 637), Burt (1928, p. 6) and I (McGuire, 1996, p. 97)

clearly recognized that Mocquard (1899) had described a lizard of the genus *Crotaphytus* Holbrook, 1842; Schmidt (1922) and Burt (1928) used the invalid name *Crotaphytus fasciatus* Mocquard, 1899 rather than the valid replacement name *C. fasciolatus*. Schmidt (1922) considered *C. fasciatus* Mocquard to be a junior synonym of *C. collaris* (Say, 1823), and Burt's (1928) sole comment regarding the species was to state that Schmidt (1922) considered *C. fasciatus* Mocquard to be a juvenile color phase of *C. collaris*. I (McGuire, 1996) recorded that *C. fasciatus* was an earlier synonym of *C. vestigium*; I adopted *C. vestigium* as the valid name of the taxon, noting that an appeal should be made to the Commission to retain the name.

4. Since the description of the nominal species in 1972, the name *C. vestigium* has been applied by at least the following 24 authors in 19 publications: Smith & Tanner (1974), Montanucci, Axtell & Dessauer (1975), Behler & King (1979), Sanborn & Loomis (1979), Montanucci (1983), Stebbins (1985), Welsh (1988), Collins (1990, 1991), McGuire (1991, 1994, 1996), Frost, Kluge & Hillis (1992), Sprackland (1993), Grismer, McGuire & Hollingsworth (1994), Axtell & Webb (1995), Frost (1995), Jennings (1997) and Powell, Collins & Hooper (1998).

5. The name *Crotaphytus fasciolatus* has never been used for the species for which it was intended, during a period of nearly 100 years, and there would be no point in now giving *C. vestigium* precedence over it (cf. Article 23.9 of the Code). To remove any uncertainty or confusion from the continued use of the name *C. vestigium*, it is desirable that the name *C. fasciolatus* be suppressed. Under Recommendation 23A, this I now propose.

6. The International Commission of Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to suppress the name *fasciolatus* Mocquard, 1903, as published in the binomen *Crotaphytus fasciolatus*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Specific Names in Zoology the name *vestigium* Smith and Tanner, 1972, as published in the trinomen *Crotaphytus insularis vestigium*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:

(a) *fasciolatus* Mocquard, 1903, as published in the binomen *Crotaphytus fasciolatus* and as suppressed in (1) above;

(b) *fasciatus* Mocquard, 1899, as published in the binomen *Crotaphytus fasciatus* (a junior primary homonym of *Crotaphytus fasciatus* Hallowell, 1853).

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3167

Schistochlamys Reichenbach, 1850 and *Neothraupis* Hellmayr, 1936 (Aves, Passeriformes): proposed conservation

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Abstract. The purpose of this application is to conserve the accustomed understanding and usage of the names for two genera of tanager from South America, *Schistochlamys* Reichenbach, 1850 and *Neothraupis* Hellmayr, 1936, by the designation of *Tanagra capistrata* Wied, 1821 as the type species of *Schistochlamys* (family THRAUPIDAE, or family EMBERIZIDAE, subfamily THRAUPINAE). At present *T. fasciata* Lichtenstein, 1823 is the valid type species of both *Schistochlamys* and *Neothraupis*. It is also proposed that the names *Diucopis* Bonaparte, 1850 and *Neothraupis* Berlepsch, 1879, unused senior synonym and senior homonym respectively of *Neothraupis* Hellmayr, be suppressed. The name *Schistochlamys* relates to a group of species from the northern part of South America; *S. capistrata* (usually cited as *S. ruficapillus capistrata*) is the cinnamon tanager from northern Brazil. The name *Neothraupis* Hellmayr relates to the monotypic genus containing *N. fasciata*, the white-banded tanager of eastern and southern Brazil, eastern Bolivia and northeastern Paraguay.

Keywords. Nomenclature; taxonomy; Aves; Passeriformes; THRAUPIDAE; EMBERIZIDAE; THRAUPINAE; *Schistochlamys*; *Neothraupis*; *Schistochlamys capistrata*; *Schistochlamys ruficapillus capistrata*; *Neothraupis fasciata*; tanagers; South America.

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1. In 1850 (1 June) Reichenbach established the generic name *Schistochlamys* on an illustration (pl. 77). Many years later P.L. Sclater (1886, p. 301) designated *Tanagra capistrata* Wied, 1821 (p. 179) as the type of the genus. Wied's nominal species has subsequently been treated as a subjective synonym of *Saltator ruficapillus* Vieillot, 1817 (p. 108) or as a subspecies of *ruficapillus*. Since Sclater's designation the generic name *Schistochlamys* has been used for a group of species (family THRAUPIDAE, or family EMBERIZIDAE, subfamily THRAUPINAE) with the cinnamon tanager of northern Brazil, cited either as *S. capistrata* or *S. r. capistrata* (see Sibley & Monroe, 1990, p. 739 and Storer, 1970, p. 247 respectively), treated as the type species.

2. By 24 June 1850 (see Sherborn, 1922, p. xxvii for the date of publication) Bonaparte (p. 491) established the name *Diucopis*, citing *Schistochlamys* as a synonym by placing the name and author (Reichenbach) in brackets after it. He listed four included nominal species in the genus: *Tanagra fasciata* Lichtenstein, 1823 (p. 32); *T. capistrata* 'Spix'; *T. leucophaea* Lichtenstein, 1818; and *T. atra* Gmelin, 1788. The first on the list, *T. fasciata*, the white-banded tanager of eastern and southern Brazil, eastern Bolivia and northeastern Paraguay, was subsequently designated as the type by G.R. Gray (1855, p. 73), who also noted *Schistochlamys* Reichenbach as a synonym. The other three nominal species are all currently included

in *Schistochlamys*: *capistrata* 'Spix' (= *capistrata* Wied, 1821) is a synonym or a subspecies of *S. ruficapillus* (Vieillot, 1817) (see para. 1 above); *leucophaea* is a synonym of *S. ruficapillus*; and *atra* is a junior primary homonym of *T. atra* Meuschen, 1787 (indeterminable) and is currently known as *S. melanopis* (Latham, 1790).

3. In 1936 Hellmayr (p. 432) established the name *Neothraupis* as a replacement (nomen novum) for *Diucopis*, which he considered to be invalid, and cited the same species, *Tanagra fasciata* Lichtenstein, 1823, as the type. Hellmayr noted (p. 432, footnote): 'This group has long been known as *Diucopis*, a name that cannot be employed, since it was originally proposed as a substitute of *Schistochlamys* Reichenbach', and under *Schistochlamys* he stated (p. 442, footnote): '*Diucopis* Bonaparte, although generally used for *Tanagra fasciata* Lichtenstein, was proposed as a substitute of *Schistochlamys* Reichenbach, and Gray's action (*Cat. Gen. Subgen. Birds*, p. 73, 1855) in selecting *T. fasciata* Lichtenstein as type, seems to me inadmissible'. Hellmayr (1936, p. 442) adopted *Schistochlamys* and cited *capistrata* Wied by designation by Sclater (1886) as the type, a usage which, although invalid (see para. 5 below), has been maintained. *Neothraupis* Hellmayr has become well established as the name for the monotypic genus containing *T. fasciata*, the white-banded tanager (see para. 6 below).

4. In proposing the name *Neothraupis* as a replacement for *Diucopis* Bonaparte, 1850, Hellmayr (1936) uncharacteristically overlooked that *Neothraupis* had previously been used by Berlepsch (1879a, p. 55) as the generic name for the single species *Pyranga cyanicterus* Vieillot, 1819 (p. 290) and that it was, therefore, a junior homonym. The name *Neothraupis* Berlepsch was published (in Schalow) on 1 April 1879 (ref. a). On 15 April (ref. b) Berlepsch established a further new generic name, *Callithraupis*, with *Pyranga cyanicterus* fixed as the type of the genus by monotypy; he did not mention the slightly earlier publication. A longer description of the genus *Callithraupis* also appeared in Berlepsch (1879, April, ref. c). Berlepsch's names *Neothraupis* and *Callithraupis* are themselves junior objective synonyms of *Cyanicterus* Bonaparte, 1850 (p. 240), which was established with *Pyranga cyanicterus* Vieillot as the type species by monotypy. The name *Cyanicterus* has consistently been used for the single species *C. cyanicterus*, the blue-backed tanager from eastern Venezuela, the Guianas and northeastern Brazil, and Berlepsch's names have remained unused.

5. Since 1886 (P.L. Sclater's type species designation) the name *Schistochlamys* has been used for a group of species with *Tanagra capistrata* Wied, 1821 treated as the type (see para. 1 above). The name *Diucopis* Bonaparte, 1850 was probably a replacement for *Schistochlamys* (Bonaparte noted 'Affinis Diucae!', referring to *Diuca* Reichenbach, 1850, pl. 78) and, under Article 67.8 of the Code, the type fixation for both genera is that of G.R. Gray's (1855) designation of *Tanagra fasciata* Lichtenstein, 1823 (see para. 2 above); the later designation by Sclater (1886) is therefore invalid. The name *Neothraupis* Hellmayr, 1936, which was itself a replacement for *Diucopis*, has been in unquestioned use for the past 64 years for the monotypic genus containing *T. fasciata* Lichtenstein, 1823 (see para. 3 above). However, recognition of *T. fasciata* as the type species of *Schistochlamys* would mean the loss of *Neothraupis* Hellmayr as a junior synonym of *Schistochlamys*, and a new name would be needed for the taxon currently known as *Neothraupis*, resulting in considerable and unnecessary confusion. I propose that Sclater's (1886) designation

for *Schistochlamys* be formally adopted, thereby maintaining the long term and current usages of both *Schistochlamys* and *Neothraupis* Hellmayr. With the publication of the 4th edition of the Code and the explicit emphasis on stability it would be inappropriate to adopt *Diucopis* in place of *Neothraupis* Hellmayr; *Diucopis* was used by Brabourne & Chubb (1912, p. 429), and barely, if ever, since then. The name *Neothraupis* Berlepsch, 1879 is a junior objective synonym of *Cyanicterus* Bonaparte, 1850 and has remained unused (see para. 4 above). The interests of stability would be best served by suppression of both *Diucopis* and *Neothraupis* Berlepsch and this I now propose.

6. Usage of *Schistochlamys* Reichenbach, 1850, *Cyanicterus* Bonaparte, 1850 and *Neothraupis* Hellmayr, 1936, both long term and current, is demonstrated by the following publications, in each of which all three names appear: Pinto (1944, pp. 505, 537, 541), Schauensee (1970, pp. 391, 398, 399), Storer (1970, pp. 247, 249, 326), Ridgely & Tudor (1989, pp. 323, 333, 334), Sibley & Monroe (1990, pp. 739, 748), Sick (1993, p. 571) and Clements (2000, pp. 659, 668). A list of a further 12 references by 14 authors in which the names have been used between 1978 and 1999, covering biology, behaviour, genetics, distribution, ecology and parasitism, is held by the Commission Secretariat.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power:
  (a) to suppress the following names:
    (i) *Diucopis* Bonaparte, 1850 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
    (ii) *Neothraupis* Berlepsch, 1879 and all uses of that name prior to the publication of *Neothraupis* Hellmayr, 1936 for the purposes of both the Principle of Priority and the Principle of Homonymy;
  (b) to set aside all previous fixations of type species for the nominal genus *Schistochlamys* Reichenbach, 1850 prior to that by P.L. Sclater (1886) of *Tanagra capistrata* Wied, 1821;

(2) to place on the Official List of Generic Names in Zoology the following names:
  (a) *Schistochlamys* Reichenbach, 1850 (gender: feminine), type species by subsequent designation by P.L. Sclater (1886) *Tanagra capistrata* Wied, 1821, as ruled in (1)(b) above;
  (b) *Neothraupis* Hellmayr, 1936 (gender: feminine), type species by subsequent designation by G.R. Gray (1855) of the replaced nominal genus *Diucopis* Bonaparte, 1850, *Tanagra fasciata* Lichtenstein, 1823;

(3) to place on the Official List of Specific Names in Zoology the following names:
  (a) *capistrata* Wied, 1821, as published in the binomen *Tanagra capistrata* (specific name of the type species of *Schistochlamys* Reichenbach, 1850);
  (b) *fasciata* Lichtenstein, 1823, as published in the binomen *Tanagra fasciata* (specific name of the type species of *Neothraupis* Hellmayr, 1936);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
  (a) *Diucopis* Bonaparte, 1850 (suppressed in (1)(a)(i) above);
  (b) *Neothraupis* Berlepsch, 1879 (suppressed in (1)(a)(ii) above and a junior objective synonym of *Cyanicterus* Bonaparte, 1850);
  (c) *Callithraupis* Berlepsch, 1879 (a junior objective synonym of *Cyanicterus* Bonaparte, 1850 and of *Neothraupis* Berlepsch, 1879).

Acknowledgements

I should like to thank Michael Walters (*Bird Section, The Natural History Museum, Tring, Hertfordshire, U.K.*), Storrs L. Olson (*National Museum of Natural History, Washington, U.S.A.*) and Anthea Gentry (*Commission Secretariat, London, U.K.*) for their generous help.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Comment on the proposed designation of *P. multiplicatus* Carlgren, 1912 as the type species of *Pachycerianthus* Roule, 1904 (Cnidaria, Anthozoa)
(Case 3111; see BZN **57**: 11–13)

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A paper by me on *Pachycerianthus* is mentioned in para. 4 of the application by Kelly & Keegan. As one who has worked on the genus, I wish to state that I am fully in accord with their proposal that *P. multiplicatus* should be designated as the type species.

Comment on the proposed conservation of *Trichia* Hartmann, 1840 (Mollusca, Gastropoda) and proposed emendation of spelling of TRICHIINAE Lozek, 1956 (Mollusca) to TRICHIAINAE, so removing the homonymy with TRICHIIDAE Fleming, 1821 (Insecta, Coleoptera)
(Case 2926; see BZN **57**: 17–23, 109–110)

E. Gittenberger, J. Goud, W.J.M. Maassen, H.P.M.G. Menkhorst, Th.E.J. Ripken and A.J. de Winter

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We strongly support the proposal by Gittenberger (published in BZN **57**: 17–23, March 2000) to conserve the stable use of the name *Trichia* Hartmann, 1840 in Mollusca. The name is much in use, unambiguously and without any controversy, in both the recent more general and the specialized literature. *Trichia* is, for example, used in the four versions of Kerney & Cameron's (1979) very well-known molluscan field guide, two versions of which (in English and in German) were cited in the application. A French version (Kerney, Cameron & Bertrand, 1999) was published recently; the Dutch version can be added (Kerney & Cameron, 1980). This implies that *Trichia* is used far more frequently in Mollusca than can be traced by citations in *Zoological Record*.

As factual data we wish to add that a search of the literature cited by *Zoological Record on CD-Rom*, vols. 115–136 (1978–2000), made clear that during that period the name *Trichia* was recorded 31 times in papers on Mollusca, 15 times in Myxomycetes, three times in Insecta and twice in Crustacea. The name *Trochulus* was not used on a single occasion. For the use of the family-group names TRICHIIDAE, TRICHIINAE and TRICHIINI there were 47 references in Insecta, three in Myxomycetes, two in Crustacea and one in Mollusca.

In relation to the use of *Trichia* in both Mollusca and Myxomycetes, we refer to the original application (para. 10). In addition we should like to point out that if the

names *Trichia* and TRICHIIDAE in Myxomycetes are accepted as senior homonyms in zoological nomenclature, as Holthuis (BZN **57**: 109–110, June 2000) has proposed, a further application must be brought to the Commission to remove the homonymy between TRICHIIDAE in Myxomycetes, Insecta and Mollusca. As recorded above and in para. 9 of the application, the family-group name is very well used in Coleoptera (unlike TRICHIINAE in molluscs).

As to the 'numerous and complicated manoeuvres by the Commission', referred to in a negative sense by Holthuis in his comment, as necessary to save *Trichia* in Mollusca, we agree to some extent. However, we prefer to use that argument quite differently. Much of the work has now been done, and this would be in vain from our viewpoint as malacologists preferring stability over a strict application of the Code, in particular in a case like this where colleagues in other fields stand to be upset in their use of names in daily practice.

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Comment on the proposed conservation of the spelling VACHONIAINAE Maury, 1973 (Arachnida, Scorpiones) to remove homonymy with VACHONIIDAE Chamberlin, 1947 (Arachnida, Pseudoscorpiones)

(Case 3119; see BZN **57**: 24–25)

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I wish to comment on a small matter regarding this case. I (Harvey, 1992) synonymised the pseudoscorpion family VACHONIIDAE Chamberlin, 1947 with the family BOCHICIDAE Chamberlin, 1930, as no significant differences could be detected between the constituent genera. A full review of the BOCHICIDAE by Muchmore (1998) has supported this synonymy, and Muchmore also showed that this family could be divided into two subfamilies, BOCHICINAE and LEUCOHYINAE Chamberlin, 1946. *Vachonium* was included within the BOCHICINAE, and no family-group name based on this genus is now in use at any level within the Pseudoscorpiones.

However, these taxonomic conclusions have little bearing on the case presented by Fet & Braunwalder, and I fully support their proposal that the spelling of the scorpion subfamily name VACHONIINAE Maury, 1973 should be changed to VACHONIAINAE.

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Comments on the proposed conservation of the specific name of *Hybognathus stramineus* Cope, 1865 (currently *Notropis stramineus*; Osteichthyes, Cypriniformes)

(Case 3131; see BZN **56**: 240–246; **57**: 111–112)

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Recently Prof Reeve Bailey submitted a well-documented application to the Commission, requesting conservation of the species name *stramineus* for the sand shiner (currently *Notropis stramineus* (Cope, 1865)), a common and relatively widespread cyprinid fish of eastern North America. The name for this species had earlier been changed by Mayden & Gilbert (1989) to *Notropis ludibundus* (Girard, 1856) on the basis of date priority. We have little factual information to add to the original petition, other than the following additional references that were not included but in which the species name *ludibundus* appears: O'Shea, Hubert & Anderson (1990); Frenzel & Swanson (1996); Gutzmer, King & Overhue (1996); Lynch & Roh (1996); Lyons (1996); Sullivan & Lydy (1999); Allenbach, Sullivan & Lydy (1999); Carlson, Daniels & Eaton (1999); and Fuller, Nico & Williams (1999, pp. 115–116).

We urge rejection of Prof Bailey's application for the following reasons, which are listed in descending order of perceived importance:

1. Bailey's statement (para. 7 of the application) that 'A few publications that appeared after 1989 have followed Mayden & C.R. Gilbert's recommended use of

Notropis ludibundus' implies limited use of this name in the literature. This statement is misleading. Bailey listed eight references in which *ludibundus* appears (to which may be added the nine listed immediately above), as compared to ten references during the same period in which *stramineus* was used. Thus, both names have appeared in the scientific literature during this period, with no clear predominance of one over the other.

2. As noted by Bailey in his application (para. 5), the sand shiner has had an unstable nomenclatural history during the 20th century, appearing under the following specific names during this period: *blennius* until 1926, *deliciosus* until 1958, *stramineus* until 1989, and both *stramineus* and *ludibundus* thereafter. Thus, the longest period of time during this century in which any of these names was used has been 32 years.

3. To a large degree, use of the name *stramineus* after 1989 relates to continued appearance of this name in the 1991 publication *Common and scientific names of North American fishes* (Robins et al., p. 23). This was justified by the comment (p. 77): 'R.L. Mayden and C.R. Gilbert, 1989, *Copeia* (4): 1084, showed that this name is a junior synonym of *Cyprinella ludibunda* Girard, 1856 (= *Notropis ludibundus*). However, this name has been unused since its proposal. A petition has been submitted to the International Commission on Zoological Nomenclature to conserve the familiar name *stramineus*. Until a decision is rendered, existing usage is retained under Article 80 of the Code'. This was reflected in the following statement in Etnier & Starnes's (1993, p. 229) account of *Notropis stramineus*: 'An additional name change is pending, as Mayden and Gilbert (1989) indicated that *Cyprinella ludibunda* Girard, 1856, is an older available name for the same species. An appeal to conserve *Notropis stramineus* as the name for this species, in the interest of stability, has been submitted to the International Commission on Zoological Nomenclature (pers. comm. R.M. Bailey), and we maintain current usage until a decision is rendered by the Commission'. Despite these statements, the application was not submitted until June 1999, nearly ten years after resurrection of the name *ludibundus*.

4. The checklist by Robins et al. (1991), cited above, is a standard reference for common and scientific names of North American fishes, and taxonomic and nomenclatural decisions published therein are routinely followed by both professionals and non-professionals.

5. Although a common and relatively widespread species that is well known to specialists in North American freshwater fishes, the sand shiner in most respects is an obscure fish that is of little direct economic importance. The scientific name thus seldom appears in the non-scientific literature.

6. Bailey's application requests suppression of not one but two senior synonyms for this species (*ludibundus* and *lineolatus*).

7. The names for four species were changed, solely on the basis of date priority and without comment or presumed dissent, in the 1991 AFS-ASIH checklist (Robins et al., pp. 16–17, 50, 72–73, 90), as follows: *Percina vigil* (Hay, 1882) (vs. *Percina ouachitae* (Jordan & Gilbert, 1887)), (Suttkus, 1985); *Anarchias similis* (Lea, 1913) (vs. *Anarchias yoshiae* Kanazawa, 1952) (Böhlke, McCosker & Böhlke, 1989, p. 118); *Uropterygius macularius* (Lesueur, 1825) (vs. *Uryopterygius diopus* Böhlke, 1967) (Böhlke, McCosker & Böhlke, 1989, p. 128); and *Myrichthys breviceps* (Richardson,

1845) (vs. *Myrichthys acuminatus* (Gronow, 1854)) (McCosker, Böhlke & Böhlke, 1989, pp. 374–375). The four examples cited are limited to species in which the senior synonyms had not previously been used and which were resurrected for the first time from the literature. It does not include examples for which the North American populations were found to be identical to widely ranging species with established older names.

8. Adoption of the name *ludibundus* does not signal widescale changes in species names among North American freshwater fishes, especially in view of the addition of Article 23.9 to the fourth edition of the Code. Analysis of four of the larger families of North American freshwater fishes (CYPRINIDAE, CATOSTOMIDAE, ICTALURIDAE and CENTRARCHIDAE), which total 442 Recent species (see Gilbert, 1998), shows that only one further name change could occur based strictly on priority. In the CYPRINIDAE, *Notropis phenacobius* Forbes, 1885 is a probable senior synonym of *Notropis annis* Hubbs & Greene, 1951, but since no types of *N. phenacobius* remain and its identity cannot be categorically established, the older name has not been used (see Gilbert, 1978, pp. 69–70; 1998, pp. 29, 40, 132). The specific name *annis* has been in consistent use and *phenacobius* is thus invalid under Article 23.9.

In conclusion, we feel that, based on the information presented above, conservation of the name *stramineus* for the sand shiner is not warranted.

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O'Shea, D.T., Hubert, W.A. & Anderson, S.H. 1990. Assemblages of small fish in three habitat types along the Platte River, Nebraska. *Prairie Naturalist*, **22**(3): 145–154.

Sullivan, K.B. & Lydy, M.L. 1999. Differences in survival functions of mosquitofish (*Gambusia affinis*) and sand shiner (*Notropis ludibundus*) genotypes exposed to pesticides. *Environmental Toxicology and Chemistry*, **18**(5): 906–911.

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(2) William J. Poly

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I support the application submitted by Reeve Bailey because nomenclatural stability would be served best by retaining the specific name of *Notropis stramineus* (Cope, 1865) over any less often used senior names. In addition to the major works cited by Prof Bailey that have used the name *N. stramineus*, there are many other local and regional faunal accounts that contain the name. It is my belief that the name has been used hundreds of times in published papers (not to mention theses, dissertations and agency reports). I spent a few days compiling literature from my own library and so far have about 154 references containing the name *stramineus* additional to those cited in the application (the list of publications is held by the Commission Secretariat). These are mostly post-1962, when the burgeoning of publications has taken place, and I consider them to be only a small portion of the published papers containing *stramineus*. In contrast, I found a mere 13 uses of *ludibundus*, all since 1991, additional to those cited in the application and by Gilbert et al. (comment above).

It is unfortunate that, even though we have standardized lists of names in ichthyology, the name *Notropis ludibundus* (Girard, 1856) has been used by some authors. It seems that there is an 'urgency' to begin using names such as *ludibundus* as soon as possible (i.e. to be among the first to do so), but it is wise to wait until the nomenclatural issues are completely resolved before changing the usage of a long standing and commonly used name. This avoids several years of publications in which an alternate name or spelling is in use as well as the more commonly used name or spelling.

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The primary thrust of this application is clearly set forth in the Abstract.

The desirability of conserving the name *Notropis stramineus* has been supported by a number of ichthyologists (see BZN **57**: 111–112) and further by William Poly (comment (2) above). It is challenged, however, in a statement (comment (1) above) drafted by Dr Carter R. Gilbert and supported by others, at least two of whom have published under the name *N. stramineus* since Mayden & Gilbert (1989) resurrected *N. ludibundus*.

One objection to the maintenance of usage of the name *Notropis stramineus* that Gilbert et al. have raised concerns the unstable nomenclatural history of the species. This is historical. The significant consideration is the notable stability and wide use of the name since 1958, as documented in my application and by Mr Poly (above). When Drs Mayden and Gilbert discovered the applicability of the name *N. ludibundus* to the sand shiner, they contacted me about it. I recommended that they submit a proposal to the Commission to conserve *N. stramineus*, but they

rejected this on the grounds that (para. 5 of Gilbert's comment) '...[it] is an obscure fish that is of little direct economic importance. The scientific name thus seldom appears in the non-scientific literature.' This is simply unacceptable.

It seems that the chief objection to the application to conserve *stramineus* relates to its timing (paras. 1 and 3 of Carter et al.). I am, of course, responsible for the long delay in its completion and I apologize. However, my intention to file a petition was announced early (Robins et al., 1991, p. 177) and was well recognized by the ichthyological community (see Etnier & Starnes, 1993). Several of the cited uses of *ludibundus* are casual and relatively obscure.

The points made in paras. 7 and 8 of the comment by Carter et al. are interesting but have no direct relevance to Case 3131.

The continued usage of the established and familiar name *N. stramineus* is at risk. It must be recognised that information on the species in the literature until 1989 will be retrieved under the name *stramineus*; only after then have some works used *ludibundus*. The interests of stability and universality in nomenclature are thus best served by use of *stramineus* in place of the unused (until 1989) synonym *ludibundus*. I therefore commend my application to the Commission and urge, under Article 23.9.3 of the Code, that they approve it.

Comments on the proposed conservation of usage of the names *Mystacina* Gray, 1843, *Chalinolobus* Peters, 1866, *M. tuberculata* Gray, 1843 and *C. tuberculatus* (J.R. Forster, 1844) (Mammalia, Chiroptera)
(Case 3095; see BZN **56**: 250–254; **57**: 117–118)

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1. Spencer & Lee have requested that the Commission should prescribe the nomenclature of the two extant species of bats of New Zealand. Our own analysis of this situation (Mayer, Kirsch, Hutcheon, Lapointe & Gingras, 1999) leads us to a different conclusion, requiring no action by the Commission, viz. that as George Forster is properly the author of *Vespertilio tuberculatus* there is no '*Mystacina tuberculata* Gray, 1843' and the specific name of the Lesser New Zealand Short-tailed Bat must be *velutina* Hutton, 1872, the first name available. Spencer & Lee's proposal does not, in its present form, lead to a stable or unambiguous nomenclature, and does violence to the principle, increasingly embodied in the Code, that authors should be able to resolve most nomenclatural questions without reference to the Commission. Our analysis follows from the clear and simple constraint of Article 50.1.1 that attention be restricted to the content of the publication concerned. Employing the evidence it permits us to use, the Code and the evidence of the publication entrain a course of nomenclatural action which leads to universality and stability.

2. We find much of Spencer & Lee's account of the nomenclatural history cogent. In particular, we entirely agree with them that, contrary to Hill & Daniel (1985), only one species-group name for bats is made available in Gray's zoological appendix to Dieffenbach (1843). We disagree about who is the author of this name: Spencer & Lee contend it is Gray, while we find it to be G. Forster. Our belief is based on a strict interpretation of Article 50.1.1: 'if it is clear from the contents that some person other than an author of the work is alone responsible both for the name ... and for satisfying the criteria of availability other than actual publication, then that person is the author of the name.' The form of citation used by Gray on page 181, citing G. Forster both after the name and at the conclusion of the description, creates a prima facie case for treating Forster as the author of the name. Further examination of the work shows that Gray used a different format when proposing new names he attributed to himself; significantly, this includes a case where his name and description is based on a drawing (see para. 3 below). Thus, following the admonition of Article 50.1.1 to limit our attention to the contents of the publication, G. Forster is the author of the name *tuberculatus*. We are not the first to attribute authorship of the description on page 181 to G. Forster Sherborn (1931, p. 6670) did so explicitly, as, apparently, did Dwyer (1962).

3. Although not admissible evidence in determining authorship under Article 50.1.1, we also examined the historical circumstances surrounding the name. The most important results of this examination are that Gray never attributed authorship of the specific name to himself; that attempts to attribute the conditions of availability to Gray by suggesting he described George's drawing fail on the grounds that the description does not correspond to the drawing; and that manuscript materials by the Forsters, now lost but known to have existed, might plausibly have been an additional source of information. Detailed documentation of the points in this paragraph and para. 2 may be found in our 1999 paper, especially in the quotations on pp. 472 and 475, the reproduction of George Forster's drawing in Fig. 1, and in the section entitled 'Whose words are they?' on pp. 479–481.

4. If, as we maintain, George Forster is the author, then strict application of the rules (including the lectotype and type species designations in our 1999 paper), leads to the maintenance, in their familiar applications, of the family name MYSTACINIDAE, the generic names *Mystacina* and *Chalinolobus*, the species names *Chalinolobus tuberculatus* and *Mystacina robusta* (the latter for the extinct Greater New Zealand Short-tailed Bat), and the subspecific names *auporica* Hill & Daniel, 1985 and *rhyacobia* Hill & Daniel, 1985 of the Lesser New Zealand Short-tailed Bat. The only change required by a strict application of the rules is the revival of the specific name *velutina* Hutton, 1872 for the Lesser New Zealand Short-tailed Bat; this specific name was also used for this bat by Thomas (1905). All of these names have a firm basis in types and/or type localities.

5. The analysis in our previous (1999) paper was completed before the full text of the 4th edition of the Code became available. We had, however, access to certain of the changes, and we applied the provisions of the new Article 70. With the full text now before us, we note two provisions which are relevant to our analysis; fortunately, they do not lead to a change in our conclusions. First, given that the effective date of the 4th edition is 1 January 2000, while our paper was published on 17 September 1999, we here restate our designation under the new Article 70 of the type species of

Mystacina Gray, 1843, so that there can be no question of its chronological applicability. We hereby designate the zoological species before Gray, the valid specific name of which we believe to be *velutina* Hutton, 1872, as the type species of *Mystacina* Gray, 1843 (see pp. 482–483 of our 1999 paper). Second, a new provision, Article 50.6, requires that usages of a name published simultaneously with its first proposal be considered as competing claims to authorship of the name, and that authorship is to be determined by the first reviser principle. We regard this provision as problematic, because it turns some common practices (e.g. symposium volumes or collected papers where a non-taxonomist uses names established in the same volume, often because the editor wants to bring nomenclatural uniformity to the collection) into a source of nomenclatural instability and uncertainty, and because it seems to clearly contravene the provisions of Article 50.1 that authorship be determined from the contents of the publication. Article 50.6's requirement that usages concern the same taxonomic taxon is also not without problems — a taxonomic taxon is defined, in part, by included specimens, yet the example given in Article 50.6 explicitly notes that the authors in the example studied different specimens. Nonetheless, we can apply this new provision to the present case. Under Article 50.6, G. Forster and Gray are in contention for authorship, to be decided by the first reviser. Our previous paper considered this very point of contention, and concluded (as we still do) that G. Forster was the author. Our conclusion was based on the evidence of the publication (as required by Article 50.1), and not by the arbitrary choice allowed to a first reviser, but the basis of the choice is irrelevant. Previous authors on the nomenclature of New Zealand's bats (e.g Dobson, 1878; Thomas, 1905; Dwyer, 1962; Hill & Daniel, 1985) do not qualify as first revisers because they did not, as required by Article 24.2.1, state the simultaneous actions and select from among them, but rather considered there to be but one author (Gray), or two actions which need not be selected among (two names authored by Gray, or one by Forster and one by Gray). We can thus meet the provisions of Article 50.6 without having to alter our nomenclatural conclusions.

6. Spencer & Lee rightly realize that if Gray is the author, then the syntypical series of *Mystacina tuberculata* is composite, consisting of the Long-tailed Bat drawn by George and the two specimens of Short-tailed Bats seen by Gray. The real threat to stability of nomenclature is the composite nature of *Mystacina tuberculata* sensu Gray, not the revival of *velutina*. As we detail in our paper, the familiar usages of the names mentioned in para. 4 are all potentially threatened (see especially the sections entitled 'Dobson's view' and 'Thomas's view'; these authors (1878 and 1905 respectively) came to opposite conclusions as to which part of the composite the name applied). Unfortunately, Spencer & Lee's request does not eliminate these threats to stability, because they do not designate a lectotype nor ask the Commission to fix a name-bearing type, under the misapprehension that the distinctiveness of the species obviates the need to determine to which of the two species the name applies. Their request thus leaves the application of the name unsettled.

7. Despite not designating a lectotype, Spencer & Lee clearly do not want the name fixed on the bat depicted in George Forster's drawing. We agree that doing so would have effects most unfortunate for nomenclatural stability. Designating one or another of Gray's 1843 specimens as the lectotype would be an improvement, but neither has definite locality, nor is definitely known to be extant (see discussion of this point by Hill & Daniel, 1985, and in our previous paper); doing so would lead to

uncertainty in the subspecific taxonomy of the Lesser New Zealand Short-tailed Bat, and even as to which kind (species or subspcies) of Short-tailed Bat the name applies (Gray's remarks on page 296 of the appendix to Dieffenbach are diagnostic of the genus only). Under our view, the name *tuberculatus* is not composite, and its type is unambiguously the New Zealand Long-tailed Bat drawn by George Forster.

8. The request of Spencer & Lee does not achieve stability; if implemented in its present form, it could lead to difficulties surpassing those it is intended to remedy. To achieve their ends, the Commission must declare Gray to be the author of *Mystacina tuberculata*, published on pages 181 and 296 of his appendix to Dieffenbach, and also fix a name-bearing type. This type should not be any of the syntypes, but a Lesser New Zealand Short-tailed Bat from within the range of *Mystacina tuberculata tuberculata* sensu Hill & Daniel (1985). In addition, *Vespertilio tuberculatus* J.R. Forster, 1844 must be declared exempt from Article 49 (see para. 9), to ensure its validity (placing a name on the Official List, as requested by Spencer & Lee, merely makes a name available; it does not ensure its validity [Article 80.6].) If Action 2 requested by Spencer & Lee is revised as here indicated, then their Actions 1, 3, and 4 are unnecessary.

9. Spencer & Lee briefly consider the possibility that Article 11.6 (concerning publication in synonymy) or Article 49 (on misapplication of species-group names) might apply. They dismiss the relevance of Article 11.6 as 'contrived', and we agree. The species-group name *tuberculatus* on page 181 of Dieffenbach is not a junior synonym (Article 11.6) of the name on page 296; it is the same name. And, even if it were a synonym, it could not possibly be junior, as it is published in the same work, and thus not possibly later established (Glossary). It is less clear to us that Article 49 does not apply, and thus that, under Spencer & Lee's interpretation that Gray is the author, use of the specific name *tuberculatus* for the New Zealand Long-tailed Bat would be barred, unless the Commission suspends application of this article. Failure to suspend would entrain a change in a specific name, precisely the sort of alteration Spencer & Lee wish to avoid.

10. We have used Article 50 to determine authorship, Articles 23 and 49 to determine availability and validity, Article 72 to typify a specific name, and Article 70 to typify a generic name. In all cases where the Code allowed a choice to be made, we have made the choice which maximizes the stability and universality of nomenclature. None of this makes a difference, of course, if the Commission uses its plenary power to establish a nomenclature by fiat. It is, however, contrary to the spirit of self-sufficiency encouraged by the Code to refer to the Commission cases which may be resolved by strict application with minimal effects on stability. It is even more in conflict with the recent direction of the Code, which stresses that authors should be able to adjudicate remedies in a way that maximizes stability and universality without reference to the Commission (e.g., the revisions to Article 70).

11. Current usage is not synonymous with universality and stability. Long-term stability and universality are achieved on a basis of definite typification and unambiguous application. Our interpretation leads to definite typification and unambiguous application of names by strict application of the Code. Spencer & Lee's request achieves neither stability nor universality, nor definite typification and unambiguous application. The revision of their proposal we sketch in para. 8 achieves these goals only through arbitrary use of the plenary power, and would involves the Commission in the search for an appropriate name-bearing type.

12. Accordingly, we ask the Commission to take no action in this case, but rather to let the rules be strictly applied.

Additional references

Dwyer, P.D. 1962. Studies on two New Zealand bats. *Zoology Publications from Victoria University of Wellington*, **28**: 1–28.

Sherborn, C.D. 1931. *Index animalium ... Sectio secunda*, part XXVI, pp. 6359 6582. British Museum, London.

(2) Hamish G. Spencer

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We cannot agree with the interpretation put forward by Mayer & Kirsch in their comment above, even though (as they note) we agree about much of the history of the case. In particular, because of their unnecessary changing of the name of the Short-tailed Bat, their interpretation does not lead to nomenclatural stability, in spite of their claim to the contrary. Here we briefly reiterate the main points in our application.

The description (of two specimens of the Short-tailed Bat) on p. 281 of the 1843 work is manifestly by Gray alone, and that on p. 181 (of what is now known to be the other species) is, as everyone agrees, in his words. Thus, although Gray attributed the name *tuberculatus(-a)* to George Forster's unpublished painting, under Article 50.1 the author must be Gray. Taking the 1843 work as a whole, as one must, *Mystacina tuberculata* was adopted by Gray as the name for what he considered to be only one species. It is difficult indeed to see how Mayer & Kirsch can contend, unlike other authors of the past century, that there is no such name as *Mystacina tuberculata* Gray. The nominal species *M. tuberculata* Gray, 1843 is the type species of *Mystacina* by original designation, and also by monotypy even though it is now known to have been originally composite. Hutton (1872) replaced the wrong name, because, unknown to him, the mystacine's name was published one year before J.R. Forster's posthumous description (1844) of the Long-tailed Bat as *Vespertilio tuberculatus*. We do not propose the designation of neotypes for either nominal species because we see no taxonomic need for them.

To prevent a possible future objection (see para. 12 of our submission and paras. 8 and 9 of the comment by Mayer & Kirsch), we add to our previous proposals (BZN **54**: 253) a request that the Commission should use its plenary power to rule that the specific name of *Vespertilio tuberculatus* (now *Chalinolobus tuberculatus*) J.R. Forster, 1844 is not invalid under Article 49 of the Code as a consequence of the application to that taxon (in part) of the specific name of *M. tuberculata* by Gray (1843). We believe that our proposals, which preserve all names in their long-established usage, are in accord with the Code; the interpretations of Mayer & Kirsch are not, and furthermore they involve the introduction of the name *Mystacina velutina* for the Short-tailed Bat.

OPINION 1955

Strombidion caudatum Fromentel, 1876 (currently *Strobilidium caudatum*; Ciliophora, Oligotrichida): specific name placed on the Official List

Keywords. Nomenclature; taxonomy; Protozoa; Ciliophora; Oligotrichida; *Strobilidium gyrans*; *Strobilidium caudatum*; *Strombilidium kahli*; *Strombilidium claparedi*; *Rimostrombidium caudatum*; ciliates.

Ruling

(1) The name *caudatum* Fromentel, 1876, as published in the binomen *Strombidion caudatum*, is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3011

An application for the conservation of the specific names of *Strombidium gyrans* Stokes, 1887 and *Strobilidium caudatum* Kahl, 1932 by the suppression of *Strombidion caudatum* Fromentel, 1876 and *Strombidium claparedi* Kent, 1882 was received from Dr Charles W. Heckman (*Institut für Hydrobiologie und Fischereiwissenschaft, Hamburg, Germany*) on 15 January 1996. After correspondence the case was published in BZN **55**: 6–8 (March 1998). Notice of the case was sent to appropriate journals.

Comments opposing the application from Prof Dr Wilhelm Foissner (*Universität Salzburg, Institut für Zoologie, Salzburg, Austria*) and from Dr John O. Corliss (*Pennsylvania, U.S.A.*) were published in BZN **55**: 233–236 (December 1998). A reply from the author of the application was published in BZN **56**: 48–49 (March 1999). A further comment from Prof Foissner was published in BZN **56**: 142 (June 1999).

Decision of the Commission

On 1 March 2000 the members of the Commission were invited to vote on the proposals published in BZN **55**: 7. At the close of the voting period on 1 June 2000 the votes were as follows:

Affirmative votes — 5: Eschmeyer, Kraus, Martins de Souza, Savage, Schuster

Negative votes — 17: Bock, Bouchet, Brothers, Cocks, Cogger, Dupuis, Heppell, Kerzhner, Macpherson, Mahnert, Mawatari, Minelli, Papp, Patterson, Ride, Song and Štys.

No vote was received from Nielsen.

Lehtinen was on leave of absence.

Dupuis commented: 'Il eut été souhaitable de disposer de plus précisions quant aux descriptions, figures et types des espèces en cause. Des informations, même négatives, quant aux types de genres considérés eussent, de même, été utiles. Néanmoins, je suis convaincu par l'excellente argumentation nomenclatoriale de Corliss sur les pratiques décevantes de certains ciliatologistes (BZN **55**: 233–236). Je suis en outre très sensible à la remarque taxinomique de Foissner (BZN **56**: 142) sur les recherches qu'exige encore une comparaison sérieuse des espèces européenne et nord-américaine. En conséquence, je vote contre la proposition de Heckman'. Heppell commented: 'There

are two issues in this case. As well as the opposing views about priority versus usage, there is a further question (on which Foissner touches briefly in his second comment on BZN **56**: 142), namely the very subjective synonymy of two nominal species, *Strobilidium caudatum* (Fromentel, 1876) and *S. gyrans* (Stokes, 1887), both originally poorly described and from widely-separated localities. If both these are essentially nomina dubia, neither priority nor usage has any special merit unless, in the absence of type material or an adequate original description, it is stated how the names are to be interpreted. I am, therefore, in favour of retaining the oldest name, *Strobilidium caudatum* (Fromentel, 1876), at least in the sense of the European populations (ignoring the totally insufficient descriptions of Müller's three species of *Trichoda* mentioned on BZN **56**: 49). *Strobilidium gyrans* (Stokes, 1887) would remain available for the North American populations if they should eventually be recognized as not conspecific with *S. caudatum*. Rather than compromise sound taxonomy by placing an avowed nomen dubium on the Official List, I suggest that the name be interpreted with reference to the description and illustrations provided by Foissner (1991), as the designation of a neotype seems less appropriate for a ciliate taxon'. Kerzhner commented: 'Since both the names *Strobilidium caudatum* (Fromentel, 1876) and *S. gyrans* (Stokes, 1887) are in use, priority should be applied'. Patterson commented: 'The situation raised in this case is widespread among protists, both 'zoological' and 'botanical'. The identities of many taxa rely on very inadequate early descriptions, there is no associated type material, and no further records. There are different strategies to deal with these taxa: (a) to treat the organisms as unidentifiable and evade linking these uncertain identities and their names to taxa currently recognized, or (b) to prevent the continued existence of old names that relate to taxa with uncertain identities. I personally favour (b), and achieve the objective by finding all possible synonyms, giving precedence on the basis of priority and then adding a contemporary interpretation of the identity of that taxon. This is what Foissner has done, so I have empathy with his view. In this case we have an additional dimension in that a user of names (an ecologist) is in dispute with taxonomists. This has arisen because the taxonomists have not solved the identity problems fast enough to provide ecologists with the tools they need. There is now a resolution to this particular problem, but it came very late (i.e. after ecologists had started to use a junior name). In this case there was a choice between actions aimed at eliminating instability and those aimed at eliminating ambiguity, and I favour the second alternative. In my view, Heckman's desire was for 'stability now', but Foissner has removed ambiguity and this will give 'stability in the future''.

Since there was a majority against the use of the plenary power to set aside the provisions of the Code, the specific name of *Strombidion caudatum* Fromentel, 1876 (currently known as *Strobilidium caudatum*), which relates to a European freshwater oligotrichous species, is placed on the Official List.

The name *Strobilidium caudatum* Kahl, 1932, which refers to a European brackish water oligotrich, is a junior secondary homonym of *Strobilidium caudatum* (Fromentel, 1876) and the replacement name *S. kahli* Petz & Foissner, 1992 is valid for the taxon if placed in *Strobilidium* Schewiakoff, 1892. If the species is placed in *Rimostrombidium* Jankowski, 1978 (BZN **56**: 48, 142), the specific name *caudatum* Kahl is reinstated (Article 59.4 of the Code).

Original reference

The following is the original reference to the name placed on an Official List by the ruling given in the present Opinion:

caudatum, *Strombidion* Fromentel, 1876, *Études sur les microzoaires ou infusoires proprement dits comprenant de nouvelles recherches sur leur organisation, leur classification et la description des espèces nouvelles ou peu connues*, p. 264, pl. 24, figs. 7–8.

OPINION 1956

Eudendrium arbuscula Wright, 1859 (Cnidaria, Hydrozoa): specific name conserved

Keywords. Nomenclature; taxonomy; Hydrozoa; EUDENDRIIDAE; *Eudendrium arbuscula*.

Ruling

(1) Under the plenary power:
  (a) the specific name *arbuscula* d'Orbigny, 1846, as published in the binomen *Tubularia arbuscula*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
  (b) it is hereby ruled that the specific name *arbuscula* Wright, 1859, as published in the binomen *Eudendrium arbuscula*, is not invalid by reason of having been replaced before 1961 as a junior secondary homonym of *Tubularia arbuscula* d'Orbigny, 1846.

(2) The name *arbuscula* Wright, 1859, as published in the binomen *Eudendrium arbuscula*, is hereby placed on the Official List of Specific Names in Zoology (not invalid by the ruling in (1)(b) above).

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:
  (a) *arbuscula* d'Orbigny, 1846, as published in the binomen *Tubularia arbuscula* and as suppressed in (1)(a) above;
  (b) *wrightii* Hartlaub, 1905, as published in the binomen *Eudendrium wrightii* (a junior objective synonym of *Eudendrium arbuscula* Wright, 1859).

History of Case 3074

An application for the conservation of the specific name of *Eudendrium arbuscula* Wright, 1859 was received from Dr Antonio C. Marques (*Universidade de São Paulo, Ribeirão Preto, Brazil*) and Dr Willem Vervoort (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*) on 1 December 1997. After correspondence the case was published in BZN **56**: 16–18 (March 1999). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 December 1999 the members of the Commission were invited to vote on the proposals published in BZN **56**: 17. At the close of the voting period on 1 March 2000 the votes were as follows:

Affirmative votes — 19: Bock, Bouchet, Cocks, Cogger, Eschmeyer, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Papp, Patterson, Ride, Savage, Schuster, Song

Negative votes — 2: Brothers and Štys.

No votes were received from Dupuis and Mawatari.

Lehtinen was on leave of absence.

Dupuis declined to vote on the grounds that less than a year had elapsed since publication of the case. [*Editorial note*. An explanation of procedure followed in sending cases for voting was given in BZN **54**: 53–54, March 1997].

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

arbuscula, *Eudendrium*, Wright, 1859, *Edinburgh New Philosophical Journal*, (n.s.)**10**: 113.

arbuscula, *Tubularia*, d'Orbigny, 1846, Zoophytes *in*: *Voyage dans l'Amérique méridionale*, vol. 5, part 4, p. 28.

wrightii, *Eudendrium*, Hartlaub, 1905, *Zoologische Jahrbücher*, Supplement 6, **3**: 547.

OPINION 1957

Sphaerius Waltl, 1838 (Insecta, Coleoptera): conserved; and SPHAERIIDAE Erichson, 1845 (Coleoptera): spelling emended to SPHAERIUSIDAE, so removing the homonymy with SPHAERIIDAE Deshayes, 1854 (1820) (Mollusca, Bivalvia)

Keywords. Nomenclature; taxonomy; Bivalvia; Coleoptera; SPHAERIIDAE; SPHAERIUSIDAE; *Sphaerium*; *Sphaerius*, *Sphaerius acaroides*.

Ruling

(1) Under the plenary power:
  (a) the suppression of the generic name *Sphaerius* Waltl, 1838 (Coleoptera) in Opinion 1331 is hereby rescinded;
  (b) it is hereby ruled that for the purposes of Article 29 of the Code the stem of the generic name *Sphaerius* Waltl, 1838 (Coleoptera) is SPHAERIUS-;

(2) The entry for *Sphaerius* Waltl, 1838 is hereby deleted from the Official Index of Rejected and Invalid Generic Names in Zoology and *Sphaerius* Waltl, 1838 (gender: masculine), type species by monotypy *Sphaerius acaroides* Waltl, 1838, is placed on the Official List of Generic Names in Zoology (Coleoptera).

(3) The name *acaroides* Waltl, 1838, as published in the binomen *Sphaerius acaroides* (specific name of the type species of *Sphaerius* Waltl, 1838), is hereby placed on the Official List of Specific Names in Zoology (Coleoptera).

(4) The entry on the Official List of Family-Group Names in Zoology for the name SPHAERIIDAE Jeffreys, 1862 (1820) is hereby emended to read 'SPHAERIIDAE Deshayes, 1854 (1820)' (Bivalvia).

(5) The name SPHAERIUSIDAE Erichson, 1845, type genus *Sphaerius* Waltl, 1838 (spelling emended by the ruling in (1)(b) above), is hereby placed on the Official List of Family-Group Names in Zoology (Coleoptera).

(6) The entry on the Official List of Family-Group Names in Zoology for the name MICROSPORIDAE Reichardt, 1976 is hereby emended to read 'MICROSPORIDAE Crotch, 1873 (type genus *Microsporus* Kolenati, 1846)' (Coleoptera).

(7) The entry on the Official Index of Rejected and Invalid Family-Group Names in Zoology for SPHAERIIDAE Erichson, 1845 is hereby emended to read 'SPHAERIIDAE Erichson, 1845 (an incorrect original spelling under the ruling given in (1)(b) above)' (Coleoptera).

History of Case 3052

An application for partial rescindment of Opinion 1331 (BZN **42**: 230–232, September 1985) so as to conserve the beetle generic name *Sphaerius* Waltl, 1838, and to remove the homonymy between the molluscan and coleopteran family-group names SPHAERIIDAE Deshayes, 1854 (then cited with the authorship and date of 'Jeffreys, 1862', but see below) (based on the generic name *Sphaerium* Scopoli, 1777) and SPHAERIIDAE Erichson, 1845 (based on *Sphaerius* Waltl, 1838), was received from Dr M.A. Jäch (*Naturhistorisches Museum, Burgring, Wien, Austria*) on 9 July 1997. After correspondence the case was published in BZN **56**: 117–120 (June 1999). Notice of the case was sent to appropriate journals.

An earlier application (BZN **26**: 235–237, April 1970) to remove the homonymy between the family name SPHAERIIDAE in Mollusca and Insecta resulted in the coleopteran generic and family names *Sphaerius* Waltl, 1938 and SPHAERIIDAE Erichson, 1845 being placed on Official Indexes (Opinion 1331, September 1985). There were flaws in that ruling which the current application sought to rectify. The new application had the support of a number of entomologists (BZN **56**: 119, para. 5).

Decision of the Commission

On 1 March 2000 the members of the Commission were invited to vote on the proposals published in BZN **56**: 119. At the close of the voting period on 1 June 2000 the votes were as follows:

Affirmative votes — 20: Bock, Bouchet, Brothers, Cocks, Cogger, Eschmeyer, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Papp, Patterson, Ride, Savage, Schuster, Song, Štys

Negative votes — 1: Heppell.

No votes were received from Dupuis and Nielsen.

Lehtinen was on leave of absence.

Voting for, Bouchet commented: 'The bivalve family-group name SPHAERIIDAE was placed on the Official List in Opinion 1331 with 'Jeffreys, 1862 (1820)' as author and date. Prior to its usage by Jeffreys the name was in fact established by Deshayes in 1854 (*Catalogue of the Conchifera or bivalve shells in the collection of the British Museum*, part 2, p. 261) as Sphaeriina (a section of the family CORBICULIDAE)'. The emended authorship and date for the molluscan name SPHAERIIDAE have been recorded in the ruling above. Dupuis declined to vote on the grounds that less than a year had elapsed since publication of the case. [*Editorial note*. An explanation of procedure followed in sending cases for voting was given in BZN **54**: 53–54, March 1997]. Voting against, Heppell commented: 'Before voting on this case I re-read the original application and proposals of 1970 and all subsequent comments and revised proposals, as well as the Commission's ruling on the case in 1985. I see no compelling reason to set aside the decision of the Commission at that time, but I agree with the present applicant that the ruling as published was flawed. In my view the authorship of the family name MICROSPORIDAE (Crotch, 1873, not Reichardt, 1976) and that of the generic name *Microsporus* (Kolenati, 1846, not Waltl, 1838) could have been corrected without a vote by the Commission. The second of these errors was introduced into Opinion 1331 but was not in the published proposals; it has already been corrected in the (1987) published *Official Lists and Indexes of Names and Works in Zoology*. The further question of the suppression of the generic name *Sphaerius* Waltl, 1838, is more problematical. In the proposals (BZN **38**: 158) on which the Commission was asked to vote in 1985, proposal (a) was for the 'use of the plenary powers to suppress the generic name *Sphaerius* Waltl, 1838 and all subsequent uses for the purposes of the Law of Priority but not for those of the Law of Homonymy'. The published ruling in Opinion 1331, however, stated that the suppression was 'for the purposes of both the Principle of Priority and the Principle of Homonymy'. There was no statement indicating that this change was deliberate. As no evidence of any homonymy with this generic name had been presented this detail of the ruling was presumably erroneous; in his application Jäch (para. 3(i)) has pointed out that

'suppression of *Sphaerius* for the purposes of homonymy has the undesirable ... effect of permitting the future introduction of this name in a quite different taxonomic sense'. Incidentally, the entry for the generic name *Sphaerium* Scopoli, 1777 in the published *Official Lists and Indexes of Names and Works in Zoology* is incorrect as it refers only to Direction 72 and not to Direction 117, where the method of type designation was corrected from subsequent designation by Gray (1847) to monotypy'.

Original references

The following are the original references to the names placed on Official Lists, and to the emendations to the entries on Official Lists and Official Indexes, by the ruling given in the present Opinion:

Sphaerius Waltl, 1838, *Isis* von Oken, **1838**: 272.

acaroides, *Sphaerius*, Waltl, 1838, *Isis* von Oken, **1838**: 272.

SPHAERIIDAE Deshayes, 1854, *Catalogue of the Conchifera or bivalve shells in the collection of the British Museum*, part 2, p. 261.

SPHAERIUSIDAE Erichson, 1845, *Naturgeschichte der Insecten Deutschlands*, **3**: 38 (incorrectly spelled as SPHAERIIDAE).

MICROSPORIDAE Crotch, 1873, *Proceedings of the American Philosophical Society*, **13**: 78.

SPHAERIIDAE Erichson, 1845, *Naturgeschichte der Insecten Deutschlands*, **3**: 38 (an incorrect original spelling of SPHAERIUSIDAE).

OPINION 1958

Macrophya Dahlbom, 1835 (Insecta, Hymenoptera): conserved by the designation of *Tenthredo montana* Scopoli, 1763 as the type species; and *Tenthredo rustica* Linnaeus, 1758: usage of the specific name conserved by the replacement of the syntypes with a neotype

Keywords. Nomenclature; taxonomy; Hymenoptera; TENTHREDINIDAE; MACROPHYINI; ARGIDAE; *Macrophya*; *Macrophya montana*; *Arge rustica*; sawflies.

Ruling

(1) Under the plenary power:
  (a) all previous fixations of type species for the nominal genus *Macrophya* Dahlbom, 1835 are hereby set aside and *Tenthredo montana* Scopoli, 1763 is designated as the type species;
  (b) all previous type fixations for the nominal species *Tenthredo rustica* Linnaeus, 1758 are hereby set aside and the female specimen labelled '*Hylotoma atrata* Forst. Schwerin'; 'coll. Konow'; 'Neotype [female] *Tenthredo rustica* Linné, 1758'; and '*Arge rustica* (Linné) [female] det. Blank & Taeger 1999' in the Deutsches Entomologisches Institut, Eberswalde, Germany, is designated as the neotype.

(2) The name *Macrophya* Dahlbom, 1835 (gender: feminine), type species by designation under the plenary power in (1)(a) above *Tenthredo montana* Scopoli, 1763, is hereby placed on the Official List of Generic Names in Zoology.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *montana* Scopoli, 1763, as published in the binomen *Tenthredo montana* (specific name of the type species of *Macrophya* Dahlbom, 1835);
  (b) *rustica* Linnaeus, 1758, as published in the binomen *Tenthredo rustica* and as defined by the neotype designated in (1)(b) above.

History of Case 3066

An application for the conservation of *Macrophya* Dahlbom, 1835 by the designation of *Tenthredo montana* Scopoli, 1763 as the type species, and of the usage of the specific name of *T. rustica* Linnaeus, 1758 by the replacement of the syntypes with a neotype, was received from Drs Stephan M. Blank and Andreas Taeger (*Deutsches Entomologisches Institut, Eberswalde, Germany*) on 13 August 1997. After correspondence the case was published in BZN **56**: 128–133 (June 1999). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 2000 the members of the Commission were invited to vote on the proposals published in BZN **56**: 131. At the close of the voting period on 1 June 2000 the votes were as follows:

Affirmative votes 21: Bock, Bouchet, Brothers, Cocks, Cogger, Eschmeyer, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Papp, Patterson, Ride, Savage, Schuster, Song, Štys

Negative votes — none.

No votes were received from Dupuis and Nielsen.

Lehtinen was on leave of absence.

Dupuis declined to vote on the grounds that less than a year had elapsed since publication of the case. [*Editorial note*. An explanation of procedure followed in sending cases for voting was given in BZN **54**: 53–54, March 1997].

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Macrophya Dahlbom, 1835, *Conspectus Tenthredinidum, Siricidum et Oryssinorum Scandinaviae, quas Hymenopterorum familias*, pp. 4, 11.

montana, Tenthredo, Scopoli, 1763, *Entomologia Carniolica* ..., p. 276.

rustica, Tenthredo, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 556.

OPINION 1959

Terebratula Müller, 1776 (Brachiopoda): *Anomia terebratula* Linnaeus, 1758 designated as the type species

Keywords. Nomenclature; taxonomy; Brachiopoda; TEREBRATULIDAE; *Terebratula*; *Terebratula terebratula*; brachiopods; Pliocene.

Ruling

(1) Under the plenary power all previous fixations of type species for the nominal genus *Terebratula* Müller, 1776 are hereby set aside and *Anomia terebratula* Linnaeus, 1758 is designated as the type species.

(2) The name *Terebratula* Müller, 1776 (gender: feminine), type species by designation under the plenary power in (1) above *Anomia terebratula* Linnaeus, 1758 is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *terebratula* Linnaeus, 1758, as published in the binomen *Anomia terebratula* and as defined by the neotype (catalogue no. BM(NH) BG152 in the Natural History Museum, London) designated by Lee & Brunton (1998) (specific name of the type species of *Terebratula* Müller, 1776) is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3094

An application for the designation of *Anomia terebratula* Linnaeus, 1758 as the type species of *Terebratula* Müller, 1776 was received from Dr Daphne E. Lee (*University of Otago, Dunedin, New Zealand*) and Dr C.H.C. Brunton (*The Natural History Museum, London, U.K.*) on 26 June 1998. After correspondence the case was published in BZN **55**: 220–223 (December 1998). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 December 1999 the members of the Commission were invited to vote on the proposals published in BZN **55**: 222. At the close of the voting period on 1 March 2000 the votes were as follows:

Affirmative votes – 21: Bock, Bouchet, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Nielsen, Papp, Patterson, Ride, Savage, Schuster, Song, Štys

Negative votes — none.

Minelli abstained.

No vote was received from Mawatari.

Lehtinen was on leave of absence.

Voting for, Brothers commented: 'I vote in favour somewhat reluctantly. No information has been provided on the identity or even the existence of type material for Müller's (1776) three originally included species. If *T. cranium* Müller is truly synonymous with *A. terebratula* Linnaeus (para. 3 of the application) and no type material for *T. cranium* exists, designation of the neotype of *A. terebratula* as the

neotype of *T. cranium* also, and designation of *T. cranium* as the type species, would have solved the type species problem without Commission intervention'. Kerzhner commented: 'I vote in support but with some doubt as the identity of the three nominal species originally included in *Terebratula* is not explained in the application'. Ride commented: 'Before the Commission places the name *A. terebratula* on the Official List, based on the neotype designated in the application, the authors should be asked to confirm that the 'incomplete' specimen nominated is sufficiently complete to indicate the structure of its internal loop, or at least that the structure has been confirmed in topotypes. My colleague Prof K.S.W. Campbell informs me that without knowledge of the structure of the loop it will remain uncertain whether the type is a terebratuloid or a terebratelloid'. [Dr D.E. Lee replied, in litt., March 2000: 'We should make it clear that we do have the internal loops present in many topotypes of *T. terebratula* and so the systematic placing is completely unambiguous']. In abstaining, Minelli commented: 'It is not clear from the application why none of the nominal species originally included in *Terebratula* by Müller (1776) would not be suitable for fixation as the type species'.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

terebratula, *Anomia*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 703.

Terebratula Müller, 1776, *Zoologiae Danicae prodromus seu animalium Daniae et Norvegiae indigenarum characteres, nomina, et synonyma imprimis popularium*, p. 249.

The following is the reference for the designation of the neotype of *Anomia terebratula* Linnaeus, 1758:

Lee, D.E. & Brunton, C.H.C. BZN **55**: 222.

OPINION 1960

Crotalus ruber Cope, 1892 (Reptilia, Serpentes): specific name given precedence over that of *Crotalus exsul* Garman, 1884

Keywords. Nomenclature; taxonomy; Reptilia; Serpentes; *Crotalus ruber*; *Crotalus exsul*; rattlesnakes; California; Mexico.

Ruling

(1) Under the plenary power the specific name *ruber* Cope, 1892, as published in the trinomen *Crotalus adamanteus ruber*, is hereby given precedence over the specific name *exsul* Garman, 1884, as published in the binomen *Crotalus exsul*, whenever the two names are considered to be synonyms.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *ruber* Cope, 1892, as published in the trinomen *Crotalus adamanteus ruber*, with the endorsement that it is to be given precedence over *exsul* Garman, 1884, as published in the binomen *Crotalus exsul*, whenever the two names are considered to be synonyms;

(b) *exsul* Garman, 1884, as published in the binomen *Crotalus exsul*, with the endorsement that it is not to be given priority over *ruber* Cope, 1892, as published in the trinomen *Crotalus adamanteus ruber*, whenever the two names are considered to be synonyms.

History of Case 3005

An application for the conservation of the specific name of *Crotalus ruber* Cope, 1892 by giving it precedence over *C. exsul* Garman, 1884 was received from Prof Hobart M. Smith (*University of Colorado, Boulder, Colorado, U.S.A.*) and 10 others on 20 November 1995. After correspondence the case was published in BZN **55**: 229–232 (December 1998). Notice of the case was sent to appropriate journals.

Comments in support of the application were received from a number of authors and published in BZN **56**: 148–149 (June 1999). The comments were from Dr Sherman A. Minton (*Indianapolis, Indiana, U.S.A.*), Dr R. Earl Olson (*The Organisation for Tropical Research, MSA Laboratories, Cambridge, Minnesota, U.S.A.*), Dr Wilmer W. Tanner (*Monte L. Bean Life Science Museum, Brigham Young University, Provo, Utah, U.S.A.*), Dr Robert W. Murphy (*Centre for Biodiversity and Conservation Biology, Royal Ontario Museum, Toronto, Ontario, Canada*) and Prof Bayard H. Brattstrom (*California State University* (*Fullerton*), *Fullerton, California, U.S.A.*).

A note that support for the application had also been received from Dr Aurelio Ramirez-Bautista and Dr Julio Lemos Espinal (*Unidad de Biología, Tecnología y Prototipos, Tlalnepantla, Mexico*) was recorded in BZN **56**: 149.

Decision of the Commission

On 1 December 1999 the members of the Commission were invited to vote on the proposals published in BZN **55**: 230–231. At the close of the voting period on 1 March 2000 the votes were as follows:

Affirmative votes — 17: Bock, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kraus, Macpherson, Mahnert, Martins de Souza, Nielsen, Papp, Patterson, Savage, Schuster, Song

Negative votes — 5: Bouchet, Kerzhner, Minelli, Ride and Štys.

No vote was received from Mawatari.

Lehtinen was on leave of absence.

Brothers commented: 'I vote for this case somewhat reluctantly but am swayed by the extensive use of the name *Crotalus ruber* in fields such as medicine'. Cogger and Ride commented that, since the holotype of *C. ruber* was without a known locality, future problems might be avoided by requesting the Commission to set aside the existing type and to approve one with unambiguous provenance, in accord with Smith & Taylor's (1950) restriction of the type locality to Dulzura, San Diego Co., California (para. 1 of the application).

Original references

The following are the original references to the names placed on an Official List by the ruling given in the present Opinion:

exsul, *Crotalus*, Garman, 1884, *Memoirs of the Museum of Comparative Zoology of Harvard College*, **8**(3): 114.

ruber, *Crotalus adamanteus*, Cope, 1892, *Proceedings of the United States National Museum*, **14**: 690.

OPINION 1961

Coluber infernalis Blainville, 1835 and *Eutaenia sirtalis tetrataenia* Cope in Yarrow, 1875 (currently *Thamnophis sirtalis infernalis* and *T. s. tetrataenia*; Reptilia, Serpentes): subspecific names conserved by the designation of a neotype for *T. s. infernalis*

Keywords. Nomenclature; taxonomy; Reptilia; Serpentes; COLUBRIDAE; *Thamnophis sirtalis infernalis*; *Thamnophis sirtalis tetrataenia*; California red-sided garter snake; San Francisco garter snake; California.

Ruling

(1) Under the plenary power all previous fixations of type specimens for the nominal species *Coluber infernalis* Blainville, 1835 are hereby set aside and the male specimen catalog no. 39197 in the California Academy of Sciences, San Francisco, is designated as the neotype.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *infernalis* Blainville, 1835, as published in the binomen *Coluber infernalis* and as defined by the neotype designated in (1) above;

(b) *tetrataenia* Cope in Yarrow, 1875, as published in the trinomen *Eutaenia sirtalis tetrataenia* and as defined by the lectotype USNM 21384 in the United States National Museum, Washington, D.C., designated by Fitch (1941).

History of Case 3012

An application for the conservation of the subspecific name of *Thamnophis sirtalis infernalis* (Blainville, 1835) for the California red-sided garter snake from the Californian coast, and of *T. s. tetrataenia* (Cope in Yarrow, 1875) for the San Francisco garter snake from the San Francisco Peninsula, by the designation of a neotype for *T. s. infernalis* was received from Dr Sean J. Barry (*University of California, Davis, California, U.S.A.*) and Dr Mark R. Jennings (*California Science Center, Piedras Blancas Research Station, San Simeon, California, U.S.A.*) on 16 January 1996. After correspondence the case was published in BZN **55**: 224–228 (December 1998). Notice of the case was sent to appropriate journals.

A comment in support of the application from Prof Hobart M. Smith (*University of Colorado, Boulder, Colorado, U.S.A.*) was published in BZN **56**: 71 72 (March 1999).

A comment from Ms Kathy Merk (*Department of Entomology, University of California at Davis, Davis, California, U.S.A.*), received during the voting period, noted: 'I believe that Drs Barry and Jennings are more than justified in seeking a remedy for the unfortunate situation they describe (the proposed transfer of the subspecific name *Thamnophis sirtalis infernalis* to the San Francisco Peninsula garter snake, hitherto called *T. s. tetrataenia*, which is protected as an endangered subspecies). Earlier this year I prepared a review of the taxonomic context of, and possible impacts of taxonomic usage on, the United States Endangered Species Act of 1973 and other conservation law in the U.S.A. The framers of the U.S. laws did

not envisage the possibility that a name could be transferred legitimately from one biological entity to another and therefore made no provision for such an event. Legal protection is conferred on the taxon by the act of 'listing', and protection thereafter goes with the name, unless geographic populations are identified. It thus could occur that protection might be removed from the species or subspecies intended by the Secretary of the Interior, and possibly conferred on an entity not in need of such protection. It is not clear how this situation could be rectified. Since additional cases of this sort are likely to arise, this case affords an excellent opportunity for the Commission to underscore the role and responsibilities of the systematic community in the conservation of nature by approving Barry and Jennings's application'.

Decision of the Commission

On 1 December 1999 the members of the Commission were invited to vote on the proposals published in BZN **55**: 227. At the close of the voting period on 1 March 2000 the votes were as follows:

Affirmative votes — 19: Bock, Brothers, Cocks, Cogger, Eschmeyer, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Papp, Patterson, Ride, Savage, Schuster, Song

Negative votes — 2: Dupuis and Štys.

Bouchet abstained.

No vote was received from Mawatari.

Lehtinen was on leave of absence.

Bouchet commented: 'The application (para. 4) refers to the [IUCN] *Red List of Threatened Animals* as 'international legislation for the protection of [species]'. The *Red List* records the conservation status of species and subspecies under certain demographic and distributional criteria. It is not a legislative text'.

Original references

The following are the original references to the names placed on an Official List by the ruling given in the present Opinion:

infernalis, *Coluber*, Blainville, 1835, *Nouvelles Annales du Muséum d'Histoire Naturelle*, Paris, (3)**4**: 291.

tetrataenia, *Eutaenia sirtalis*, Cope in Yarrow, 1875, *Report upon geographical and geological explorations and surveys west of the one hundredth meridian*, vol. 5 (Zoology), part 4, p. 546.

The following is the reference for the designation of the lectotype of *Eutaenia sirtalis tetrataenia* Cope in Yarrow, 1875:

Fitch, H.S. 1941. *American Midland Naturalist*, **26**(3): 581, 585.

OPINION 1962

Arctocephalus F. Cuvier, 1826 and *Callorhinus* Gray, 1859 (Mammalia, Pinnipedia): conserved by the designation of *Phoca pusilla* Schreber, 1775 as the type species of *Arctocephalus*; and *Otaria* Péron, 1816 and *Eumetopias* Gill, 1866: conserved by the designation of *Phoca leonina* Molina, 1782 as the type species of *Otaria*

Keywords. Nomenclature; taxonomy; Mammalia; Pinnepedia; OTARIIDAE; *Arctocephalus*; *Callorhinus*; *Otaria*; *Eumetopias*; *Arctocephalus pusillus*; *Callorhinus ursinus*; *Otaria leonina*; *Otaria byronia*; *Eumetopias jubata*; eared seals; fur seals; sea lions.

Ruling

(1) Under the plenary power:
  (a) the name *Otoes* Fischer, 1817 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
  (b) all previous type species fixations for the following nominal genera are hereby set aside:
    (i) *Arctocephalus* F. Cuvier, 1826, and *Phoca pusilla* Schreber, 1775 is designated as the type species;
    (ii) *Otaria* Péron, 1816, and *Phoca leonina* Molina, 1782 is designated as the type species.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
  (a) *Arctocephalus* F. Cuvier, 1826 (gender: masculine), type species by designation under the plenary power in (1)(b)(i) above *Phoca pusilla* Schreber, 1775;
  (b) *Callorhinus* Gray, 1859 (gender: masculine), type species by monotypy *Phoca ursina* Linnaeus, 1758;
  (c) *Otaria* Péron, 1816 (gender: feminine), type species by designation under the plenary power in (1)(b)(ii) above *Phoca leonina* Molina, 1782 (invalid senior subjective synonym of *Phoca byronia* de Blainville, 1820);
  (d) *Eumetopias* Gill, 1866 (gender: masculine), type species by monotypy *Arctocephalus monteriensis* Gray, 1859 (a junior subjective synonym of *Phoca jubata* Schreber, 1776).

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *pusilla* Schreber, 1775, as published in the binomen *Phoca pusilla* (specific name of the type species of *Arctocephalus* F. Cuvier, 1826);
  (b) *ursina* Linnaeus, 1758, as published in the binomen *Phoca ursina* (specific name of the type species of *Callorhinus* Gray, 1859);
  (c) *byronia* de Blainville, 1820, as published in the binomen *Phoca byronia* (first available subjective synonym of *Phoca leonina* Molina, 1782 (a junior primary homonym of *P. leonina* Linnaeus, 1758), the type species of *Otaria* Péron, 1816);

(d) *jubata* Schreber, 1776, as published in the binomen *Phoca jubata* (senior subjective synonym of *Arctocephalus monteriensis* Gray, 1859, the type species of *Eumetopias* Gill, 1866).

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Otoes* Fischer, 1817, as suppressed in (1)(a) above;

(b) *Halarctus* Gill, 1866 (a junior objective synonym of *Arctocephalus* F. Cuvier, 1826);

(c) *Callotaria* Palmer, 1892 (a junior objective synonym of *Callorhinus* Gray, 1859).

History of Case 3058

An application for the conservation of *Arctocephalus* F. Cuvier, 1826 and *Callorhinus* Gray, 1859 by the designation of *Phoca pusilla* Schreber, 1775 as the type species of *Arctocephalus*, and of *Otaria* Péron, 1816 and *Eumetopias* Gill, 1866 by the designation of *Phoca leonina* Molina, 1782 as the type species of *Otaria*, was received from Dr Alfred L. Gardner (*U.S. Geological Survey, Patuxent Wildlife Research Center, National Museum of Natural History, Washington, D.C., U.S.A.*) and Dr C. Brian Robbins (*National Museum of Natural History, Washington, D.C., U.S.A.*) on 5 August 1997. After correspondence the case was published in BZN **56**: 136–141 (June 1999). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that *Phoca byronia* de Blainville, 1820 was the valid name for *P. leonina* Molina, 1782, the proposed type species (and that designated by Palmer, 1904) of *Otaria* Péron, 1816, the southern sea lion genus, *P. leonina* Molina being a junior primary homonym of *P. leonina* Linnaeus, 1758, the elephant seal. The synonymy between *P. leonina* Molina and *P. byronia* had been cited by a number of authors, including J.A. Allen (1902, p. 115), Cabrera (1958, p. 301) and Wozencraft in Wilson & Reeder (1993, p. 328).

Decision of the Commission

On 1 March 2000 the members of the Commission were invited to vote on the proposals published in BZN **56**: 139–140. At the close of the voting period on 1 June 2000 the votes were as follows:

Affirmative votes — 20: Bock, Bouchet, Brothers, Cocks, Cogger, Eschmeyer, Heppell, Kerzhner (part), Kraus, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Papp, Patterson, Ride, Savage, Schuster, Štys

Negative votes — 1: Song.

No votes were received from Dupuis and Nielsen.

Lehtinen was on leave of absence.

Kerzhner voted in favour of the designation of *Phoca pusilla* Schreber, 1775 as the type species of *Arctocephalus* F. Cuvier, 1826, but abstained from voting on the type species of *Otaria* Péron, 1816 because he was not sure that *Phoca leonina* Molina, 1782 was an available name. Dupuis declined to vote on the grounds that less than a year had elapsed since publication of the case. [*Editorial note*. An explanation of procedure followed in sending cases for voting was given in BZN **54**: 53–54, March 1997].

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

Arctocephalus F. Cuvier, 1826, Phoque *in* Cuvier, F. (Ed.), *Dictionnaire des Sciences Naturelles*, vol. 39 (Perroq - Phoq), p. 554.

byronia, *Phoca*, de Blainville, 1820, *Journal de Physique, de Chimie et d'Histoire Naturelle*, **91**: 287, 300.

Callorhinus Gray, 1859, *Proceedings of the Zoological Society of London*, **1859**: 359.

Callotaria Palmer, 1892, *Proceedings of the Biological Society of Washington*, **7**: 156.

Eumetopias Gill, 1866, *Proceedings of the Essex Institute*, **5**: 7.

Halarctus Gill, 1866, *Proceedings of the Essex Institute*, **5**: 7.

jubata, *Phoca*, Schreber, 1776, *Die Säugethiere in Abbildungen nach der Natur mit Beschreibungen*, vol. 3, part 17, p. 300, pl. 83B.

Otaria Péron, 1816, Histoire de l'éléphant marin, ou phoque à trompe [*Phoca proboscidae*, N.]: pêches des Anglois aux Terres Australes *in*: *Voyage de découvertes aux Terres Australes, exécuté sur les Corvettes le Géographe, le Naturaliste, et la Goëlette le Casuarina, pendant les années 1800, 1801, 1802, 1803 et 1804*, vol. 2, p. 37, footnote.

Otoes Fischer, 1817, *Mémoires de la Société Impériale des Naturalistes de Moscou*, **5**: 445.

pusilla, *Phoca*, Schreber, 1775, *Die Säugethiere in Abbildungen nach der Natur mit Beschreibungen*, vol. 2, part 13, pl. 85.

ursina, *Phoca*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 37.

INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

General. Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

Text. Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

References. These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

Submission of Application. Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

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The Bulletin of Zoological Nomenclature

ICZN The Official Periodical of the International Commission on Zoological Nomenclature

THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The *Bulletin* is published four times a year for the International Commission on Zoological Nomenclature by the International Trust for Zoological Nomenclature, a charity (no. 211944) registered in England. The annual subscription for 2001 is £115 or $210, postage included. All manuscripts, letters and orders should be sent to:

The Executive Secretary,
International Commission on Zoological Nomenclature,
c/o The Natural History Museum,
Cromwell Road,
London, SW7 5BD, U.K. (Tel. 020 7942 5653)
(e-mail: iczn@nhm.ac.uk)
(http://www.iczn.org)

BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 57, part 4 (pp. 197-246) 21 December 2000

Notices

(a) *Invitation to comment*. The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles*. At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications*. The following new applications have been received since going to press for volume 57, part 3 (published on 29 September 2000). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Dianulites petropolitana* Dybowski, 1877 and *Diplotrypa petropolitana* Nicholson, 1879 (Bryozoa): proposed conservation of the specific names. (Case 3160). P.N. Wyse Jackson.

(2) *Croatobranchus mestrovi* (Hirudinea): a proposed ruling that the generic and specific names were established by Sket, Jalžić, Kerovec, Kučinić & Trontelj (2000) and not by Kerovec, Kučinić & Jalžić (1999). (Case 3168). B. Sket, B. Jalžić, M. Kerovec, M. Kučinić & P. Trontelj.

(3) Bloch, M.E. & Schneider, J.G. (1801), *M.E. Blochii . . . systema ichthyologiae . . .*: a proposal that the first issue of this work in 1800 is to be treated as unpublished. (Case 3170). R. Fricke & H.-J. Paepke.

(4) *Cryphops* Richter & Richter, 1926 (Trilobita): proposed conservation. (Case 3171). D.J. Holloway & K.S.W. Campbell.

(5) *Leptodactylus chaquensis* Cei, 1950 (Amphiba, Anura): proposed conservation of the specific name. (Case 3172). J.M. Cei.

(6) *Phrynidium crucigerum* Lichtenstein & Martens, 1856 (currently *Atelopus cruciger*; Amphibia, Anura): proposed conservation of the specific name by the designation of a neotype. (Case 3173). S. Lötters & E. La Marca.

(7) *Pardosa* C.L. Koch, 1847 (Arachnida, Araneae): proposed designation of *Lycosa alacris* C.L. Koch, 1833 as the type species. T. Kronestedt, C.D. Dondale & A.A. Zyuzin.

(8) *Ampullaria canaliculata* Lamarck, 1822 (currently *Pomacea canaliculata*; Mollusca, Gastropoda): proposed conservation of the specific name. (Case 3175). R.H. Cowie, A.R. Kabat & N.L. Evenhuis.

(9) *Ptinus tectus* Boieldieu, 1856 (Insecta, Coleoptera): proposed conservation of usage of the specific name. (Case 3176). S.E. Thorpe.

(10) *Pachygnathus* Dugès, 1834 and *Alycus* C.L. Koch, 1841 (Arachnida, Acari): proposed designation of *P. ornithorhynchus* Grandjean, 1837 and *A. roseus* C.L. Koch, 1841 as the respective type species, with the designation of neotypes for both species. (Case 3177) M. Uusitalo & P.T. Lehtinen.

(d) *Rulings of the Commission.* Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin*.

Election of members of the International Commission on Zoological Nomenclature

At the XVIII (New) International Congress of Zoology held in Athens from 28 August–2 September 2000 the following were elected as members of the Commission:

Dr MIGUEL ALONSO-ZARAZAGA (*Museo Nacional de Ciencias Naturales, José Gutiérrez Abascal 2, E-28006 Madrid, Spain*). Dr Alonso-Zarazaga works on the systematics and biogeography of Coleoptera, in particular the Curculionoidea. He prepared the Spanish official text of the Code, published in 2000 as the *Código Internacional de Nomenclatura Zoológica*.

Dr DALE R. CALDER (*Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, Canada M5S 2C6*). Dr Calder's main research interest is the systematics, ecology and biogeography of Hydrozoa.

Prof Dr GERARDO LAMAS (*Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Apartado 14–0434, Lima-14, Peru*). Prof Lamas works on the systematics, biology and evolution of Neotropical butterflies.

Dr PETER K.L. NG (*Department of Biological Sciences, National University of Singapore, Kent Ridge, Singapore 119260*). Dr Ng's main fields of interest are the systematics and ecology of decapod crustaceans and the freshwater fishes of S.E. Asia.

Dr GARY ROSENBERG (*Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103–1195, U.S.A.*). Dr Rosenberg works on the taxonomy, biology and diversity of gastropod and bivalve Mollusca.

The International Code of Zoological Nomenclature

The new and extensively revised 4th Edition of the *International Code of Zoological Nomenclature* was published in August 1999 and came into effect on 1 January 2000; it entirely supersedes the 3rd (1985) edition. Some notes about the new edition, which contains many new provisions, will be found on the Commission's Website (www.iczn.org).

The price of the 4th Edition is £40 or $65; the following discounts are offered:

Individual members of a scientific society ordering one copy for personal use are offered a discount of 25% (price £30 or $48); the name and address of the society should be given.

Individual members of the American or European Associations for Zoological Nomenclature ordering one copy for personal use are offered a discount of 40% (price £24 or $39).

Postgraduate or undergraduate students ordering one copy for personal use are offered a discount of 25% (price £30 or $48); the name and address of the student's supervisor should be given.

Institutions or agents buying 5 or more copies are offered a 25% discount (price £30 or $48 for each copy).

Prices include surface postage; for Airmail please add £2 or $3 per copy.

Copies may be ordered from: ITZN, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk) or AAZN, Attn. D.G. Smith, MRC-159, National Museum of Natural History, Washington, D.C. 20560–0159, U.S.A. (e-mail: smithd@nmnh.si.edu).

Payment should accompany orders. Cheques should be made out to 'ITZN' (sterling or dollars) or to 'AAZN' (dollars only). Payment to ITZN (but not to AAZN) can also be made by credit card (Visa or MasterCard only) giving the cardholder's number, name and address and the expiry date.

Individual purchasers of the Code are offered a 50% discount on one copy of the following publications for personal use:

The Official Lists and Indexes of Names and Works in Zoology (1987) — reduced from £60 to £30 and from $110 to $55;

Towards Stability in the Names of Animals — a History of the International Commission on Zoological Nomenclature 1895–1995 (1995) — reduced from £30 to £15 and from $50 to $25;

The Bulletin of Zoological Nomenclature (the Commission's quarterly journal) — discount valid for up to 5 years; for 2000 the discounted price would be £55 or $100.

The Code is published in a bilingual volume (English and French). Official texts in a number of other languages are planned and their availability will be announced on the Commission's Website. The Spanish text has been published; details from e-mail: mcnb168@mncn.csic.es, fax (+34) 915645078.

The linguistic appendices in the 3rd Edition have not been included in the new edition; copies of these may be obtained without charge from ITZN.

International Trust for Zoological Nomenclature

Financial Report for 1999

The major event for the Trust during 1999 was the publication on 10 August of the 4th edition of the *International Code of Zoological Nomenclature*. This had been in preparation for several years by an Editorial Committee under the chairmanship of Prof W.D.L. Ride; the final production owed much to close liaison between Prof A. Minelli and the printers in Italy. The cost of printing the *Code* was covered by a contribution of £5592 from the Société Française de Systématique for the French text, a bequest of £612 from the late Dr C.W. Sabrosky, and a loan of £10,718 from the American Association for Zoological Nomenclature, to all of whom we express our thanks. All but £1360 of the AAZN loan had been paid back by the end of the year from sales of the *Code* in North America.

The net sum of £24,475 received from sales of the 4th edition of the *Code* (i.e. £39,958 sales, less £15,483 printing costs) was the main reason for the Trust's surplus of £9633 for 1999, compared with the considerable deficits suffered by the Trust for several previous years. Income from other publications — the *Bulletin of Zoological Nomenclature*, the *Official Lists and Indexes*, the Centenary History of the Commission, and the 3rd edition of the *Code* — came to £29,285, while £7276 received from donations continued the downward trend of previous years in this source of income. Interest and investment income of £9286 and capital gain of £7893 from the sale of part of the Trust's reserve fund brought the total income for the year to £99,290. Sale of part of the Trust's reserve fund was a temporary measure to maintain cash flow, and the sums involved have already been reinvested from the proceeds of sales of the new Code.

The main expenditures in 1999 were £59,640 for the salaries and National Insurance of the Secretariat of the International Commission on Zoological Nomenclature, £15,483 for printing the new Code, and £12,857 for printing the *Bulletin of Zoological Nomenclature* and the distribution of all publications. Other costs of £1237 for office expenses and £440 for depreciation of office equipment brought the total expenditure to £89,657. The Secretariat of the Commission was again housed in The Natural History Museum, London, whom we thank for their continuing support. The Trust wishes to express its thanks to all the donors listed below who contributed to its work during the year. Continuation of the work of the Trust for the international zoological and palaeontological community is only possible because of the support received from its donors.

M.K. HOWARTH
Secretary and Managing Director
19 April 2000

List of donations and grants received during the year 1999

Academia Sinica, Taiwan	£120
American Association for Zoological Nomenclature	£3094
Canadian Society of Zoologists	£82
European Association for Zoological Nomenclature	£499
W.N. Eschmeyer	£590

International Union of Biological Sciences	£1227
Japanese Society of Systematic Zoology	£258
Royal Danish Academy of Sciences and Letters	£94
Royal Entomological Society of London	£300
C.W. Sabrosky (bequest)	£612
St John's College, Cambridge	£250
Zoological Society of London	£150
Total	£7276

INTERNATIONAL TRUST FOR ZOOLOGICAL NOMENCLATURE INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 1999

Income		
SALE OF PUBLICATIONS		
Bulletin of Zoological Nomenclature	£26518	
International Code of Zoological Nomenclature (3rd Ed.)	761	
International Code of Zoological Nomenclature (4th Ed.)	39958	
Official Lists and Indexes	1329	
Centenary History	677	
	69243	
GRANTS AND DONATIONS		12868
BANK AND INVESTMENT INTEREST		9286
CAPITAL GAIN ON INVESTMENTS		7893
		99290
Expenditure		
SALARIES, NATIONAL INSURANCE AND FEES	59640	
OFFICE EXPENSES	1237	
PRINTING OF 4TH EDITION OF CODE	15483	
PRINTING OF BULLETIN AND DISTRIBUTION OF PUBLICATIONS	12857	
DEPRECIATION OF OFFICE EQUIPMENT	440	
		89657
Surplus for the year		£9633

International Commission on Zoological Nomenclature

General Session of the Commission, Athens, 29 August 2000

Present: Prof A. Minelli (President), Commissioners Bock, Brothers, Dupuis, Eschmeyer, Lehtinen, Nielsen, Ride and Song. Dr Tubbs (Executive Secretary) and Mrs A. Gentry were present from the Secretariat. The President welcomed Dr Eschmeyer and Prof Song to their first Commission meeting.

1. Apologies for absence had been received from Commissioners Bouchet, Cocks, Cogger, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Mawatari, Papp, Patterson, Savage, Schuster and Štys.

2. The Minutes of the previous General Session (Budapest, August 1996; BZN **53**: 234–238) were accepted and signed, as were the Minutes of the meeting and Workshop of the IUBS Section of Zoological Nomenclature held in Budapest (BZN **53**: 239–244).

3. The Commission noted and accepted the Executive Secretary's Report to IUBS covering the years 1997–2000.

4. *International Code of Zoological Nomenclature*

The Fourth Edition had come into force on 1 January 2000, following the publication of the English and French texts on 10 August 1999. Since then the *Code* had been published in Spanish by the Museo Nacional de Ciencias Naturales in Madrid, and publication of the texts in German, Japanese and Russian was expected shortly. The texts in all six languages had been adopted by the Commission and all are equivalent in force, meaning and authority (Article 87 of the *Code*). Prof Song said that a Chinese text was under consideration.

The Commission noted that the cost of printing the English and French bilingual volume and dispatching copies to London and Washington had been £15,483. A legacy from the late Dr Curtis W. Sabrosky (former President) and a loan from the American Association for Zoological Nomenclature had contributed to this and were received with gratitude; the Société Française de Systématique had made a contribution of £5592 for the printing of the French text.

By 25 July 2000 1772 copies of the *Code* (in English and French) had been sold by the Secretariat in London and had been distributed to 51 countries; the American Association for Zoological Nomenclature had sold about 670 further copies, mostly in North America. Sales were continuing.

It was proposed and agreed that interactive electronic versions (e.g. on the World Wide Web and on disk) of the *Code* would be useful and that the preparation of these should be explored.

It was agreed to record that the translators preparing future texts should not include in the prefaces their own opinions of the Code's provisions.

The Commission thanked the members of the Editorial Committee for their work, extending over 11 years, on the preparation of the new *Code*. The translators of the various official texts were also thanked.

5. *Procedure for the election of a President*

Prof Minelli's six-year term of office would end in November 2001, and under the Bylaws it was agreed that Commissioners Dupuis and Ride would augment the Council for the purpose of nominating two candidates for the Presidency.

6. *Election of new members of the Commission*

It was noted that the Commission had 24 members, following the retirement of two members since the last meeting. Under Article 3.1 of the Constitution, the terms of service of five Commissioners (Cocks, Heppell, Lehtinen, Savage and Schuster) would end at the close of the present meeting, and two more Commissioners would retire within the next two years.

Under Article 4.4.1 of the Constitution the Commission decided that five vacancies should be filled by a ballot in which all zoologists attending the XVIII International Congress of Zoology in Athens would be eligible to vote; further vacancies would be filled in by-elections.

Twenty-eight possible candidates for election to the Commission had been nominated by various individuals and organisations, and these nominations and the accompanying information were considered in detail. Ten of the persons nominated were selected as being particularly appropriate to ensure that the membership of the Commission included workers in diverse fields of zoology and from different parts of the world.

The ten selected candidates were presented to the IUBS Section of Zoological Nomenclature (i.e. all zoologists attending the Congress) in a ballot which was open on 30 and 31 August. [The five candidates elected in that ballot were Dr M.A. Alonso-Zarazaga (Spain; Coleoptera), Dr D.R. Calder (Canada; Cnidaria), Prof Dr G. Lamas (Peru; Lepidoptera), Dr P.K.L. Ng (Singapore; Crustacea and Ichthyology) and Dr G. Rosenberg (U.S.A.; Mollusca)].

7. *Future procedures of the Commission*

Several background papers were provided showing (a) the present and projected financial position of the International Trust for Zoological Nomenclature, the not-for-profit company which is registered in the U.K. to administer the Commission's financial and publishing operations, and (b) the responses to a questionnaire, circulated to Commissioners and the Secretariat by the President, on changes in operating procedures which might be inherently desirable and/or be required by financial constraints.

The Trust (and therefore in effect the Commission) had been in substantial deficit every year from 1989 to 1998, since sales of publications (mainly the *Bulletin*) covered less than half of the operating costs. While sales of the new edition of the *Code* would result in modest surpluses in 1999 and 2000, the situation would then deteriorate. This deterioration would accelerate as reserves became depleted, and if no substantial changes in income or expenditure occurred it was estimated that the financial resources would be exhausted in 10–12 years. At its annual meeting in May 2000 the Trust had concluded that there was a serious need for either a greatly increased income from sales and particularly from grants and donations, or a substantial reduction in expenditure, or both.

It was noted that the Secretariat, which since 1959 had been housed free of charge in The Natural History Museum, London, at present consisted of three persons (only

one employed full-time) and that Dr Tubbs did not wish to continue as Executive Secretary beyond the end of 2001. The Secretariat carried out the editorial work on the *Bulletin* and the Commission's administrative tasks, including the distribution of publications. In addition to this members of the Secretariat answered a very large number of nomenclatural enquiries each year, and the provision of this help is one of the Commission's main services to zoologists.

In the background papers and in the meeting it was pointed out that only a very small proportion of the world's zoologists had easy access to the *Bulletin*, and that a quarterly journal did not provide a suitable forum for lively, extensive and cheap discussion of issues. The Internet (including the World Wide Web) now provided the means to overcome these particular disadvantages, but for reasons of permanency and clarity it would remain necessary to publish some material in durable and edited form, in addition to ephemeral and unedited Internet distributions. The method and place(s) of such publication would need to be considered.

It was agreed that sudden drastic (and irreversible) changes in operating procedures should not be made, but that, over a period of say 2–3 years and with appropriate initial caution, (a) use of the Internet should be increasingly exploited for the publication and discussion of cases submitted to the Commission, and (b) Commissioners and other advisers should take some of the editorial workload off the Secretariat. These actions would have the advantages mentioned in the previous paragraph, and could allow a reduction in the staffing (and hence cost) of the Secretariat.

While permanent (and presumably on paper) publication would still be required, it was not necessary to publish all cases submitted to the Commission in the same detail as has been traditional; nor would all the points raised in informal Internet discussions need to be printed.

Various possibilities had been put forward in response to the President's questionnaire, and it was agreed to appoint a committee (the President [Chairman] and Commissioners Bock, Eschmeyer and Nielsen) to consider how the Internet and an increased editorial and advisory rôle for Commissioners and others could make the Commission's work both more effective and less costly. It would be desirable for the committee to make initial recommendations to the Trust's annual meeting in May 2001 so that the financial implications could be discussed there.

The Commission provides a service to the global biological community, and it was clear that efforts to obtain suitable financial support from international agencies must be intensified.

8. *Lists of scientific names*

Commissioner Eschmeyer said that his experience in ichthyology caused him to emphasize that the production of a virtually complete list of names in a particular taxonomic field was a very major task; however, such lists were extremely valuable, even if they had not been formally adopted by the Commission as prescribed in Article 79 of the *Code*.

It was agreed that the Commission should encourage the production of lists of names, and that the adoption of *Lists of Available Names* could in time save zoologists (and the Commission) a great amount of unnecessary bibliographic work.

9. *Registration of new names*

No provision for the registration of new names as a condition of their availability had been incorporated into the new edition of the *Code*, because the tentatively suggested procedures had drawbacks and some zoologists had expressed themselves as opposed even in principle. However, the rapid improvements in electronic databases and (in contrast to many publications) their global accessibility mean that registration of new names would be feasible, and it has very considerable merits. It was agreed that the Commission should give further consideration to registration, and that there should be liaison with *Zoological Record* with respect to both registration of new names and lists of existing ones.

10. *'Sale' of new names*

The Commission's attention was drawn to correspondence which had been published in *Science* (21 January, 18 February and 28 April 2000) on the subject of advertisements seeking financial sponsors of names for newly recognised botanical and zoological taxa. The taxa at present 'advertised' were based on *bona fide* scientific work and the support sought was for altruistic purposes, but this might not always be so and the practice raised the possibility that in future some persons might propose taxa for reasons of financial gain. Commissioners recognised that this would be both unethical and a source of confusion, but the control and even definition of undesirable financial sponsorship was difficult. The situation would be kept under review.

11. *The proposal of a 'Phylocode'*

A draft, by a number of workers, of a formal set of rules to govern the phylogenetic nomenclature of all supraspecific taxa (or clades) in botany and zoology had been made available on the World Wide Web under the title *The Phylocode*. The proposed rules avoid the use of ranks such as families and genera, and taxa are not defined by reference to name-bearing types. At present the draft *Phylocode* does not include rules for the naming of species, but already at least one taxon which would normally be treated as a species has been described avoiding that term, using a non-binominal name and without assigning the taxon to a genus.

As the Commission has stated in the Preamble of the *Code*, none of its provisions 'restricts the freedom of taxonomic thought or action', and phylogenetic methodology is in very wide use. However, the existence of two disparate formal Codes of nomenclature would be most confusing to students and others; it would not promote stability and universality of nomenclature, at least for taxa whose names are regulated by the existing *Code*. The Commission agreed that discussions with the proponents of the *Phylocode* would be most valuable, and as a first step a person closely associated with the draft *Phylocode* would be invited to contribute an article for the *Bulletin*.

12. *Next meeting*

Since the next General Assembly of IUBS (Naples, 7–12 November 2000) would take place very soon after the present meeting, it was agreed that the consideration of the date and place of the next general session of the Commission should be deferred.

13. *Conclusion*

The President thanked all those who had been present at the meeting and those who had sent background papers as contributions to the discussions.

On behalf of the Commission he wished to thank seven members, who had retired since the previous meeting or whose terms of office were completed at the close of the present one, for their long and dedicated service. These were Dr L.R.M. Cocks, Mr D. Heppell, Dr Z. Kabata, Dr P.T. Lehtinen, Dr I.W.B. Nye, Prof J.M. Savage and Prof Dr R. Schuster.

Case 3156

Chiton lepidus Reuss, 1860 (currently *Lepidochitona lepida*; Mollusca, Polyplacophora): proposed conservation of the specific name

Enrico Schwabe
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Abstract. The purpose of this application is to conserve the specific name of *Chiton lepidus* Reuss, 1860 for a chiton (currently known as *Lepidochitona lepida*, family ISCHNOCHITONIDAE, subfamily LEPIDOCHITONINAE) from the Middle Miocene of Europe. The name has been in use for the taxon for 140 years but it is a junior primary homonym of *Chiton lepidus* Gould, 1859, the name for a Recent species (family ISCHNOCHITONIDAE, subfamily ISCHNOCHITONINAE). Gould's name is currently treated as a junior subjective synonym of *Chiton luzonica* Sowerby, 1842 (now *Lepidozona luzonica*), an Indo-Pacific species from the Philippines to the Arabian Gulf.

Keywords. Nomenclature; taxonomy; *Lepidochitona lepida*; *Lepidozona luzonica*; ISCHNOCHITONIDAE; ISCHNOCHITONINAE; LEPIDOCHITONINAE; chitons; Miocene; Europe; Indo-Pacific.

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1. Gould (1859, p. 164) described *Chiton* (*Lepidopleura*) *lepidus* from the China Sea at 24° North. He did not mention any specimens (see also Gould, 1862, p. 118). In 1892 Pilsbry (p. 117) quoted the manuscript notes of Philip P. Carpenter (see Pilsbry, 1893, p. iv for their history): 'The girdle scales are those of *Lepidopleurus* [= *Lepidozona*], except that the imbrication is irregular', and placed *Chiton lepidus* in the genus *Ischnochiton* Gray, 1847.

2. The specific name *lepidus* Gould, 1859, in combination with the generic name *Ischnochiton*, was used by Nierstrasz (1905, p. 29), Leloup (1941, p. 12) and Kaas & Van Belle (1980, p. 73). In 1964 Johnson (p. 100, pl. 22, fig. 2) selected a syntype (USNM 1865 in the National Museum of Natural History, Washington) as the lectotype, noting a second specimen (USNM 24263) that was 'reduced to plates' as the 'paratype' (i.e. paralectotype). In 1990 Kaas & Van Belle (p. 51) synonymized *Chiton* (*Lepidopleura*) *lepidus* with *Chiton luzonica* Sowerby, 1842 (p. 104), a species described on six specimens from the Philippines (Albay, Isle of Luzon and Sarsogon). A lectotype for *C. luzonica* Sowerby (specimen BMNH 19790175/1 in the Mollusc Section of the Natural History Museum, London) was designated by Kaas & Van Belle (1987, p. 245, fig. 111, map 52). The synonymy between *lepidus* Gould and *luzonica* has been maintained (see Kaas & Van Belle, 1998, p. 109 and Slieker, 2000, pp. 52, 147, pl. 14, fig. 3) and the species is currently known as *Lepidozona luzonica* (Sowerby, 1842).

3. In 1860 Reuss (p. 259, pl. 8, figs. 12–13) established a new species *Chiton lepidus* from the Middle Miocene of Rudoltice, Bohemia. The name was adopted by Rochebrune (1883, p. 62) in combination with *Tonicia* Gray, 1840. In 1897 Sacco

(p. 90, pl. 7, fig. 32) identified Reuss's species as *Chiton marginatus* Pennant, 1777; subsequent authors, however, have treated *Lepidochitona marginata* either as a distinct species or as a synonym of *L. cinerea* (Linnaeus, 1767). With the exception of Laghi (1977, p. 105), who treated *lepidus* Reuss as a synonym of *L. cinerea*, the name *lepidus* has consistently been used (see Procházka, 1900, pp. 72, 117; Sulc, 1934, p. 10, pl. 1, figs. 13–15, with bibliography, and Malatesta, 1962, p. 157), and the species has for some time been placed in the genus *Lepidochitona* Gray, 1821 (see Baluk, 1965, p. 370; Baluk, 1971, p. 459, pl. 4, figs. 6–12; Baluk, 1984, p. 288, pl. 7, figs. 1–3; Van Belle, 1981, p. 47; Dell'Angelo & Forli, 1994, p. 228 and Dell'Angelo, Palazzi & Pavia, 1999, p. 265).

4. The specific name of *Chiton lepidus* Reuss, 1860 is a junior primary homonym of *C. lepidus* Gould, 1859. However, neither species is now included in the original 'catch-all' genus *Chiton*, and they have not been included in the same genus since 1883, when Rochebrune placed *lepidus* Reuss in *Tonicia* Gray, 1840 (see para. 3 above). With the exceptions of Sacco (1897) and Laghi (1977), the name *lepidus* Reuss has had continuous usage since publication and, to my knowledge, no author has mentioned the homonymy. I am not aware of a junior synonym for the species. To avoid the confusion which would result from upsetting the long-established usage of *lepidus* Reuss, 1860, and in the interest of nomenclatural stability, I propose that the name be conserved. Gould's (1859) name *lepidus* is treated as a junior synonym and the species is currently known as *Lepidozona luzonica* (Sowerby, 1842).

5. Article 23.9.5 of the Code records that 'When an author discovers that a species-group name in use is a junior primary homonym of another species-group name also in use, but the names apply to taxa not considered congeneric after 1899, the author must not automatically replace the junior homonym; the case should be referred to the Commission for a ruling under the plenary power and meanwhile prevailing usage of both names is to be maintained'.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to rule that the specific name *lepidus* Reuss, 1860, as published in the binomen *Chiton lepidus*, is not invalid by reason of being a junior primary homonym of *Chiton lepidus* Gould, 1859;

(2) to place on the Official List of Specific Names in Zoology the name *lepidus* Reuss, 1860, as published in the binomen *Chiton lepidus* (not invalid by the ruling in (1) above).

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Case 3096

Dichrorampha Guenée, 1845 (Insecta; Lepidoptera): proposed precedence over *Amaurosetia* Stephens, 1835

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Abstract. The purpose of this application is to conserve the generic name *Dichrorampha* Guenée, 1845 for a widespread and well-known Holarctic genus of Microlepidoptera (family TORTRICIDAE), by giving it precedence over the name *Amaurosetia* Stephens, 1835. The type species of *Amaurosetia* is *Phalaena albinella* Linnaeus, 1758, now known to be a synonym of *Dichrorampha petiverella* (Linnaeus, 1758), but this was probably based on a misidentification. The name *Amaurosetia* had never been associated with the TORTRICIDAE until 1997, and before that had not been applied to any taxon in the 20th-century. *Dichrorampha* currently includes about 80 species in the Palaearctic region and 11 species in the Nearctic.

Keywords. Nomenclature; taxonomy; Lepidoptera; Microlepidoptera; TORTRICIDAE; moths; *Dichrorampha*; *Amaurosetia*.

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1. *Amaurosetia* Stephens, 1835 (p. 353) has as its type species (by the designation of Westwood, 1840, p. 114) *Phalaena albinella* Linnaeus, 1758 (p. 541). Robinson & Nielsen (1983, p. 201) showed that *P. albinella* is a synonym of *P. petiverella* Linnaeus, 1758 (p. 540), currently known as *Dichrorampha petiverella* (Linnaeus, 1758). Werneburg (1864, pp. 234, 276) had suggested that it could be conspecific with *Micropterix mansuetella* Zeller, 1844, but according to Bradley (1963, p. 154) an early reference to *Phalaena albinella* by Haworth (1828, p. 581) represents *Elachista megerlella* (Hübner, 1810) (family ELACHISTIDAE). *Amaurosetia* was listed as a synonym of *Borkhausenia* Hübner, 1825 (family OECOPHORIDAE) by Bradley (1972, p. 18) and this was followed by Vives Moreno (1994, p. 68).

2. Following the identification of *P. albinella* as *Dichrorampha petiverella* by Robinson & Nielsen (1983), *Amaurosetia* was introduced as the valid generic name for species hitherto placed in *Dichrorampha* Guenée, 1845 by Leraut (1997, p. 148) in a checklist of the Lepidoptera of France, Belgium and Corsica. However, the fact (see above) that Haworth (1828) held *Phalaena albinella* to be an elachistid suggests that Stephens (1835) also did not have the true *P. albinella* before him when he described *Amaurosetia*, and that this probably represents a case of a misidentified type species. According to Stephens, his generic name *Amaurosetia* is taken from two Greek words which he translates as "obscurus" and "tinea". As it is somewhat unlikely that he would mistake his concept of a "tinea" for his concept of a tortricid species, it is probable that his specimens of *albinella* were misidentified. In any event, the name *Amaurosetia* had never been associated with the family TORTRICIDAE until Leraut's 1997 checklist, and indeed it had not been used for any taxon in the 20th-century. If it were not for Leraut's action it would be possible to reject *Amaurosetia* as a nomen oblitum under Article 23.9.2 of the Code.

3. *Dichrorampha* Guenée, 1845 (p. 185) is usually assumed (see Nye & Fletcher, 1991, p. 94) to have *Grapholitha plumbagana* Treitschke, 1830 (p. 218) as its type species, as designated by Fernald (1908, p. 56). However, there is an earlier available designation of type species for "*Dichrorhampha*" (an incorrect subsequent spelling) made by Desmarest (1857, p. 224) who cited "*politana*, W.V.", i.e. *Tortrix politana* [Denis & Schiffermüller], 1775. *Tortrix politana* was an originally included nominal species in *Dichrorampha*, but Obraztsov (1953, p. 78 and fig. 35) established *Dichrorampha gueneeana* Obraztsov, 1953 to denote the taxonomic species that Guenée, Desmarest and other authors had misidentified as *Tortrix politana*. The latter is a junior synonym of *Pyralis strigana* Fabricius, 1775, currently known as *Lathronympha strigana* (Fabricius, 1775), and if Desmarest's designation were to be followed *Lathronympha* Meyrick, 1926 (p. 27) would become a junior subjective synonym of *Dichrorampha*. Acceptance of Fernald's designation of *G. plumbagana* would maintain usage of both *Dichrorampha* and *Lathronympha*, and this is proposed below.

4. Prior to 1953, when Obraztsov published a revision of the Palaearctic species of *Dichrorampha*, European workers had mainly used the name *Hemimene* Hübner, [1825] for the genus. However, Heinrich (1926, p. 9) had already used the name *Dichrorampha* in his revision of the North American TORTRICIDAE. *Hemimene* is a synonym of *Pammene* Hübner, [1825] and is not applicable to the group under consideration.

5. The name *Dichrorampha* has been used in the following monographs on Palaearctic TORTRICIDAE: Hannemann (1961), Danilevsky & Kuznetsov (1968), Bentinck & Diakonoff (1968), Kuznetsov (1978), Bradley et al. (1979) and Razowski (1991). It has also been used in numerous taxonomic papers: Sauter (1966), Opheim (1968), Bradley & Tremewan (1970), Passerin d'Entreves (1972), Komai (1979), Heppner (1981), Gibeaux (1983), Miller (1983), Razowski (1989, 1991), Huemer (1991, 1996) and Trematerra (1991). The name has been used in numerous regional and national checklists, of which the two most important ones are the North American list by Hodges et al. (1983) and the European list by Karsholt & Razowski (1996). *Dichrorampha* is also used in the important global works by van der Geest & Evenhuis (1991) and Nye & Fletcher (1991). Apart from Leraut (1997) *Amaurosetia* was not used for any taxon during the 20th-century.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power:
   (a) to set aside all fixations of type species for the nominal genus *Dichrorampha* Guenée, 1845 before the designation by Fernald (1908) of *Grapholitha plumbagana* Treitschke, 1830;
   (b) to give the name *Dichrorampha* Guenée, 1845 precedence over the name *Amaurosetia* Stephens, 1835 whenever the two are considered to be synonyms;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Dichrorampha* Guenée, 1845 (gender: feminine), type species by designation by Fernald (1908), as ruled in (1)(a) above, *Grapholitha plumbagana* Treitschke, 1830, with the endorsement that it is to be given precedence over the name *Amaurosetia* Stephens, 1835 whenever the two are considered to be synonyms;

(b) *Amaurosetia* Stephens, 1835 (gender: feminine), type species by designation by Westwood (1840) *Phalaena albinella* Linnaeus, 1758, with the endorsement that it is not to be given priority over the name *Dichrorampha* Guenée, 1845 whenever the two are considered to be synonyms;

(3) to place on the Official List of Specific Names in Zoology the following names:
(a) *plumbagana* Treitschke, 1830, as published in the binomen *Grapholitha plumbagana* (specific name of the type species of *Dichrorampha* Guenée, 1845);
(b) *albinella* Linnaeus, 1758, as published in the binomen *Phalaena albinella* (specific name of the type species of *Amaurosetia* Stephens, 1845).

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Case 3162

Ceratichthys micropogon Cope, 1865 (currently *Nocomis micropogon*; Osteichthyes, Cypriniformes): proposed conservation of usage of the specific name by the designation of a neotype

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and the other members of the joint Common and Scientific Names Committee of the American Fisheries Society and the American Society of Ichthyologists and Herpetologists: Joseph S. Nelson (Chairman) (*University of Alberta, Alberta, Canada*), Edwin J. Crossman (*Royal Ontario Museum, Toronto, Ontario, Canada*), Hector Espinosa-Perez (*Universidad Nacional Autonoma de México, Mexico City, D.F., Mexico*), Lloyd T. Findley (*CIAD-Unidad Guaymas, Guaymas, Sonora, Mexico*), Robert N. Lea (*California Fish and Game, Monterey, California, U.S.A.*) and James D. Williams (*United States Geological Survey, Gainesville, Florida, U.S.A.*).

Abstract. The purpose of this application is to conserve the specific name of *Ceratichthys micropogon* Cope, 1865 (now *Nocomis micropogon*) for the common and widespread river chub (family CYPRINIDAE) of eastern North America. Cope's (1865) description has been shown to have been based on a hybrid between the river chub and the common shiner, *Luxilus cornutus* (Mitchill, 1817). The name *N. micropogon* has been used consistently for the river chub since 1926 but, under Article 23.8 of the Code, it is not a valid name for the parent species of the hybrid. It is proposed that the current usage of *N. micropogon* for the river chub be conserved by the designation of a neotype.

Keywords. Nomenclature; taxonomy; Osteichthyes; Cypriniformes; CYPRINIDAE; *Nocomis micropogon*; river chub; North America.

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1. Cope (1865, p. 277, footnote) described *Ceratichthys micropogon*, based on a single specimen (no. ANSP 5061 in the Academy of Natural Sciences of Philadelphia), 67 mm standard length, from the Conestoga River, in the Susquehanna River drainage of eastern Pennsylvania.

2. Cope (1867, p. 366, pl. 12, fig. 2), in a redescription of *C. micropogon*, suggested the possibility that it was of hybrid origin, and for many years the identity of the nominal species was in doubt.

3. The genus *Nocomis* Girard, 1856, to which *Ceratichthys micropogon* is now referred, was based on the single nominal species *N. nebracensis* Girard, 1856, collected in the Sweetwater River, a tributary of the Platte or Nebraska River. Jordan & Evermann (1896, pp. 322–323) synonymised *N. nebracensis*, *N. micropogon* (Cope, 1865), and *Semotilus biguttatus* Kirtland, 1841 (p. 344, the hornyhead chub) with *Luxilus kentuckiensis* Rafinesque, 1820 (pp. 238–239), described from an unspecified

locality in the state of Kentucky (Jordan & Gilbert, 1886, p. 4 having already synonymised *biguttatus* with *kentuckiensis*). The genus *Nocomis* was long considered to comprise a single species to which these authors, Jordan (1889, p. 110), Goldsborough & Clark (1908, p. 36) and Fowler (1909, p. 550, pl. 27) applied the name *kentuckiensis*.

4. Hubbs (1926, pp. 28–29), in his review of *Nocomis*, concluded that the genus comprised three species, of which two (the river and hornyhead chubs) occur in Kentucky. Another member of the genus, *Nocomis effusus* Lachner & Jenkins, 1967 (pp. 560–570, the redtail chub), was later described from this state, and three other species found outside Kentucky were described in 1971 (see Lachner & Jenkins, 1971a, pp. 17–41; 1971b, pp. 3–10).

5. Hubbs (1926) determined that Rafinesque (1820), in the original description of *kentuckiensis*, did not list any diagnostic characters by which the two (now three) Kentucky species of *Nocomis* could be distinguished. Based on his findings, Hubbs (1926) adopted what he considered to be the next available specific names: Cope's (1865) name *micropogon* for the river chub, and Kirtland's (1841) name *biguttatus* for the hornyhead chub, with Girard's (1856) name *nebrascensis* treated as a junior synonym of the latter (see also Lachner & Jenkins, 1971a, p. 13).

6. Lachner & Jenkins (1971a, p. 42) examined the holotype of Cope's (1865) nominal species *Ceratichthys micropogon* and found the specimen to be hybrid between the river chub and the common shiner, *Notropis cornutus* (Mitchill, 1817) (now *Luxilus cornutus*), thus confirming Cope's (1867) earlier suggestion (para. 2 above). Lachner & Jenkins noted that Cope's (1865) specimen resembled others resulting from hybridisation between the river chub and the common shiner, and that this hybridisation is common.

7. Lachner & Jenkins (1971a) noted that Article 17(2) of the 1961 Code stated that a name is or remains available even though 'it is found that the original description relates to ... an animal or animals later found to be hybrid'. They then applied Cope's specific name *micropogon* to a 'presumed parent [the river chub] of the type specimen' (see para. 9 below).

8. Article 17(2) of both the 1961 and 1964 editions of the Code stated (as does Article 17.2 of the current edition) that a species-group name later considered to have been based on a hybrid remains available, but no mention was made as to its validity for a taxon. The situation was clarified by an addition to the Code adopted at the Monaco International Congress of Zoology in 1972 (BZN **29**: 81, December 1972; see also BZN **31**: 79–81, August 1974). The new Article 24c stated that 'a species-group name which is found to have been based on a hybrid (Art. 17(2)) must not be applied to either of the parental species'. This addition was incorporated into the 1985 edition and the current (4th) edition of the Code (as Article 23h and 23.8 respectively).

9. Although its use for the river chub is invalid under Article 23.8 of the Code, the name *micropogon* Cope, 1865 has consistently been used for the species since 1926 (see para. 5 above). To our knowledge *micropogon* is the only name for the river chub; there is no junior synonym (see Gilbert, 1998, pp. 29, 114). A new name would disrupt nomenclatural stability of this common and widespread species, would serve no useful purpose, and would be confusing to all those with an interest in the species, including those working in applied fields (ecology, conservation, physiology and behavior, for example) as well as taxonomists. We propose that *Nocomis micropogon*

(Cope, 1865) be conserved for the river chub, and that a neotype be designated in accord with this long-term and current usage of the name. The proposed neotype is specimen no. USNM 166416 in the National Museum of Natural History, Washington, D.C., a nuptial male (165 mm standard length) collected by Ernest A. Lachner on 3 June 1948 from Stone Creek, a tributary of the Juniata River (Susquehanna River drainage), Huntingdon County, Pennsylvania (the locality of the proposed neotype is thus in the same river drainage as Cope's original type locality). The specimen was illustrated by Lachner & Jenkins (1971a, p. 47, fig. 25).

10. The Commission Secretariat holds a representative list of 26 publications, dating from 1928 to 1995 and additional to those mentioned in the application, which demonstrate the long-established and current usage of the name *Nocomis micropogon* (Cope, 1865) for the river chub. The most recent works include Carlander (1969, pp. 402–403), P.W. Smith (1979, p. 74), Stauffer, Hocutt & Denoncourt (1979), Buynak & Mohr (1980), Trautman (1981, pp. 272 274), Cooper (1983, pp. 94–95), C.L. Smith (1985, pp. 144–145), Burr & Warren (1986), Menhinick (1991, pp. 70–71), Etnier & Starnes (1993, pp. 198–199), Jenkins & Burkhead (1994, pp. 321–324) and Stauffer, Boltz & White (1995, pp. 112–114).

11. This application is supported by J. Albert, R.M. Bailey, H.L. Bart, S.A. Bortone, H.T. Boschung, B.W. Bowen, J.C. Briggs, N.M. Burkhead, R.C. Cashner, A.A. Echelle, D.A. Etnier, K.E. Hartel, R.E. Jenkins, R.L. Mayden, L.G. Nico, L.M. Page, J.E. Randall, H.W. Robison, M.J. Sabaj, W.F. Smith-Vaniz, W.C. Starnes, J.R. Stauffer, B.A. Thompson, J.C. Tyler, S.J. Walsh and J.T. Williams.

12. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all previous type fixations for *Ceratichthys micropogon* Cope, 1865 and to designate the male specimen USNM 166416 in the National Museum of Natural History, Washington, D.C., as the neotype;

(2) to place on the Official List of Specific Names in Zoology the name *micropogon* Cope, 1865, as published in the binomen *Ceratichthys micropogon* and as defined by the neotype designated in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3163

Holacanthus ciliaris bermudensis Goode, 1876 (currently *Holacanthus bermudensis*; Osteichthyes, Perciformes): proposed conservation of usage of the subspecific name by the designation of a neotype

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Abstract. The purpose of this application is to conserve the subspecific name of *Holacanthus ciliaris bermudensis* Goode, 1876 (currently cited as *Holacanthus bermudensis*) for the blue angelfish (family POMACANTHIDAE), a common, relatively widespread and visually prominent marine reef-dwelling species occurring in the tropical Western Atlantic. Goode's (1876) original description was based partly or entirely on hybrids (a total of 12 syntypes) between the blue angelfish and the closely related queen angelfish, *Holacanthus ciliaris* (Linnaeus, 1758) and, under Article 23.8 of the Code, *H. bermudensis* is not a valid name for the parent species. It is proposed that a neotype for *H. bermudensis* be designated in accord with the current usage of the name.

Keywords. Nomenclature; taxonomy; Osteichthyes; Perciformes; POMACANTHIDAE; *Holacanthus bermudensis*; blue angelfish; Western Atlantic.

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1. Goode (1876, pp. 43–44) described *Holacanthus ciliaris* var. *bermudensis* based on 12 syntypes from Bermuda. The name *bermudensis* was conditionally proposed (on the provision that the differences from *H. ciliaris* 'should prove constant') but is available under Article 11.5.1 of the Code.

2. Jordan & Rutter (in Jordan & Evermann, 1898, p. 1684) proposed the name *Angelichthys isabelita*, based on the holotype (specimen no. CAS-SU 363 in the California Academy of Sciences, San Francisco) from Key West, Florida, for what is called in English the blue angelfish. Nichols & Mowbray (1914, p. 581) later described

Angelichthys townsendi, also based on a holotype from Key West (specimen no. AMNH 4751 in the American Museum of Natural History, New York).

3. Of the three names *bermudensis*, *isabelita* and *townsendi*, *isabelita* was the one most frequently used between 1898 and 1933 (see, for example, Evermann & Marsh, 1900, p. 252; Breder, 1929, p. 220; and Jordan, Evermann & Clark, 1930, p. 361).

4. Beebe & Tee-Van (1933a, p. 149; 1933b, p. 177) determined that the descriptions of both *bermudensis* and *isabelita* were based on the blue angelfish. Following priority, they adopted the name *bermudensis* for the taxon.

5. W.H. Longley had earlier concluded that the description of the third nominal species, *Angelichthys townsendi*, was based on a hybrid between the blue angelfish and the closely related queen angelfish, *Holacanthus ciliaris* (Linnaeus, 1758). His conclusions were summarized by Hildebrand (in Longley & Hildebrand, 1941, p. 154), who used the name *A. isabelita* for the blue angelfish and made no mention of *bermudensis*.

6. With the exception of Longley & Hildebrand (1941), subsequent authors followed Beebe & Tee-Van (1933a, 1933b) in using the name *bermudensis* for the blue angelfish during the period 1933–1968 (see, for example, Briggs, 1958, p. 283; Bardach, 1958, p. 143; Bardach, 1959, p. 80; Menzel, 1959; Springer & Woodburn, 1960, pp. 69, 94; Bailey et al., 1960, p. 32; Herald, 1960, p. 156; Collette, 1962, p. 442; Böhlke & Chaplin, 1968, p. 418).

7. Feddern (1968, p. 377) analyzed the hybridisation between the blue angelfish and its close congener the queen angelfish, and determined that all three extant syntypes of Goode's (1876) original material (specimens no. USNM 154852 in the National Museum of Natural History, Washington, D.C.), as well as the holotype of *Angelichthys townsendi*, are hybrids. Feddern (1968) also found that the holotype of *Angelichthys isabelita* is a purebred blue angelfish which shows no evidence of hybridisation.

8. Feddern (1968) reintroduced the younger name *isabelita* for the blue angelfish because of the 'probable hybrid nature' of *bermudensis*, and Randall (1968, pp. 187–188) and Starck (1968, p. 24) followed Feddern in using *isabelita*.

9. Bailey et al. (1970, pp. 44, 77–78) retained *bermudensis* for the blue angelfish, pointing out that Feddern's reintroduction of the name *isabelita* for this species was 'unnecessary'. They erroneously recorded that 'under Article 17(2) of the International Code of Zoological Nomenclature a species-group name that is composite or found to be based on a hybrid retains availability *for either parental species until formally restricted to one or the other in a subsequent publication* [present italics]. In the interest of stability of nomenclature we restrict the name *bermudensis* to the blue angelfish' (see para. 11 below). On this basis, Feddern (1972, p. 4) reversed his previous usage and again adopted *bermudensis* for the blue angelfish. However, the words in the present italics (above) did not occur in the Code.

10. Article 17(2) of both the 1961 and 1964 editions of the Code stated (as does Article 17.2 of the current edition) that a species-group name based on specimens later considered to be hybrids remains available, but no mention was made as to its validity for a taxon. The situation was clarified by an addition to the Code adopted at the Monaco International Congress of Zoology in 1972 (BZN **29**: 81, December 1972; see also BZN **31**: 79–81, August 1974). The new Article 24c stated that 'a species-group name which is found to have been based on a hybrid (Art 17(2)) must

not be applied to either of the parental species'. This addition was incorporated into the 1985 edition and the current (4th) edition of the Code (as Article 23h and 23.8 respectively).

11. Although its use for the purebred blue angelfish is invalid under Article 23.8 of the Code, since it was based (at least in part) on hybrid specimens, the name *bermudensis* has been adopted in all publications subsequent to Bailey et al. (1970); see, for example, Allen (1979, pp. 286–287), Robins et al. (1980, p. 47), Robins et al. (1991, p. 56), Robins & Ray (1986, p. 194, pl. 3), Boschung (1992, p. 149), Humann (1994, p. 27), Smith (1997, pp. 546–547), Deloach (1999, p. 359), Smith-Vaniz, Collette & Luckhurst (1999, p. 277).

12. The blue angelfish is a common and attractive reef fish in Florida, the Bahamas and Bermuda, is readily observed by recreational swimmers and divers, and is frequently displayed in public aquaria. The specific name *bermudensis* has been consistently used during the past 67 years (except briefly in 1968) in nearly every book on western Atlantic reef fishes, in recreational guides, in information panels associated with public displays, and in scientific publications covering applied fields (ecology, conservation, behavior and physiology) as well as taxonomy (paras. 6, 9 and 11 above).

13. Smith-Vaniz, Collette & Luckhurst (1999, p. 277), in their book on Bermudan fishes, reviewed the nomenclatural history of the blue angelfish and strongly recommended, in the interest of stability, that an application be submitted to the Commission seeking conservation of the usage of the specific name of *Holacanthus bermudensis*. To once again reverse the usage of its scientific name and adopt *isabelita* for this common, well known, visually prominent fish would be most unfortunate; it would serve no useful purpose and would be confusing to all those with an interest in the species.

14. Feddern's (1968) determination of the holotype of *Angelichthys isabelita* Jordan & Rutter, 1898 as a purebred blue angelfish, without evidence of hybridisation, and thus the synonymy between *Holacanthus bermudensis* auct. and *isabelita*, has been accepted by subsequent authors (paras. 8, 9 and 11 above). We therefore propose that the usage of *H. bermudensis* should be conserved for the blue angelfish by the designation of the holotype of *H. isabelita* (see para. 2 above) as the neotype of *H. bermudensis*. We have considered a neotype from Bermuda, but all the specimens from there which we have checked (in the collections of the University of Florida, the Academy of Natural Sciences of Philadelphia, and the National Museum of Natural History, Washington) show some evidence (however slight) of introgressive hybridisation. Adoption of the *isabelita* holotype as the neotype would render the name *isabelita* a junior objective synonym of *bermudensis* and as such *isabelita* would be placed on the Official Index, so removing the threat to the stable and exclusive use of *bermudensis* for the blue angelfish.

15. This application is supported by J. Albert, R.M. Bailey, H.L. Bart, S.A. Bortone, H.T. Boschung, B.W. Bowen, J.C. Briggs, N.M. Burkhead, R.C. Cashner, A.A. Echelle, D.A. Etnier, K.E. Hartel, R.E. Jenkins, R.L. Mayden, L.G. Nico, L.M. Page, J.E. Randall, H.W. Robison, M.J. Sabaj, W.F. Smith-Vaniz, W.C. Starnes, J.R. Stauffer, B.A. Thompson, J.C. Tyler, S.J. Walsh and J.T. Williams.

16. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all previous type fixations for *Holacanthus ciliaris bermudensis* Goode, 1876, and to designate specimen no. CAS-SU 363 in the California Academy of Sciences, San Francisco, as the neotype;
(2) to place on the Official List of Specific Names in Zoology the name *bermudensis* Goode, 1876, as published in the trinomen *Holacanthus ciliaris bermudensis* and as defined by the neotype designated in (1) above;
(3) to place on the Official Index of Invalid and Rejected Specific Names in Zoology the name *isabelita* Jordan & Rutter, 1898, as published in the binomen *Angelichthys isabelita* (a junior objective synonym of *Holacanthus ciliaris bermudensis* Goode, 1876).

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Comments on the proposed conservation of *Trichia* Hartmann, 1840 (Mollusca, Gastropoda), and the proposed emendation of spelling of TRICHIINAE Ložek, 1956 (Mollusca) to TRICHIAINAE, so removing the homonymy with TRICHIIDAE Fleming, 1821 (Insecta, Coleoptera)
(Case 2926; see BZN **57**: 17–23, 109–110, 166–167)

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I support the proposal by Edmund Gittenberger to conserve the name *Trichia* Hartmann, 1840 in Mollusca. Contrary to the statement by Holthuis that the genus is not of any importance in applied science (BZN **57**: 109 110, June 2000), the common *Trichia striolata* (Pfeiffer, 1828), mentioned in para. 3 of the application, is known in Britain as the 'strawberry snail' because of its pest status in strawberry fields and generally in gardens, having been widely spread by human activity.

After a period of instability because of uncertainty about its nomenclatural status, the use of *Trichia* as the name of the gastropod genus has stabilized during the last four decades. Watson (1922, p. 278) defended *Trichia* against *Capillifera* Honigmann, 1906 (p. 190, a replacement name for *Trichia* Hartmann), which had been favoured by Gude & Woodward (1921). Then, after the use of the name *Trochulus* 'Chemnitz, 1786' for the same genus by Lindholm (1927), the key papers in which the validity of *Trichia* was re-established were Boettger (1928), Watson (1943, pp. 66–67) and Forcart (1958). Their arguments, however, have been undermined by the subsequent inclusion of Article 11d in the 1964 Code (Article 11.6.1 of the current Code) and by the discovery of the earlier date of publication for the brachyuran homonym *Trichia* de Haan, 1839 (paras. 5 and 1 respectively of the application). As stated in the application, the junior synonym *Zalasius* Rathbun, 1897 has had considerable usage for the few, rare species assigned to the crab taxon and that name is acceptable to carcinologists working with it.

Gittenberger (para. 3) gave the type species of *Trichia* Hartmann, 1840 as *Helix hispida* Linnaeus, 1758 by subsequent designation by Herrmannsen (1849). This is probably historically correct but is contrary to the conclusion of Boettger (1928, p. 2) that the type species is *T. filicina* Hartmann, 1841 by monotypy. This conclusion has been accepted by several later authors (for example, Likharev & Rammel'meier, 1952, p. 448; Forcart, 1958, who synonymized *T. filicina* with *T. plebeia* (Draparnaud, 1805)). Hartmann's work was published in eight Hefte between 1840 and 1844 and the correct type fixation depends on whether p. 41 (on which the genus and the new nominal species *T. filicina* were described) was published before or after p. xiii (on which the nominal species *T. hispida* and *Helix sericea* Draparnaud are mentioned). I discussed in detail (Heppell, 1966) the question of the relative dates of Hartmann's work and consequent effect on the type fixation and concluded, from available evidence, that p. xiii was published not in 1844 (as believed by Boettger) but in 1840, in which case Herrmannsen's (1849) designation is valid. It must be admitted, however, that a certain amount of doubt remains and I believe it would be better if the matter were resolved by the Commission setting aside all previous fixations and ruling under the plenary power that the type species of *Trichia* Hartmann is *Helix hispida* Linnaeus, 1758.

Gittenberger noted (para. 8) a further homonym, *Trichia* Hong, 1981, but did not mention two other homonyms: *Trichia* Nietner, 1861 and *Trichia* Reuter, 1875. Nietner (1861, p. 3) included the new genus and species *T. exigua* under Lepidoptera in a *List of the enemies of the coffee tree and their parasites* and gave a description (p. 20) of the caterpillar and moth. Hampson (1892, p. 494) stated that the description was not recognizable, and included it under the heading 'Species formerly recorded as Indian which are omitted'. I know of no subsequent use of this name in Lepidoptera. *Trichia* Reuter (1875, pp. 81 82), monotypic for the new species *T. punctulata*, was introduced for a Texan bug (Heteroptera). The genus was renamed *Tiryus* by Kirkaldy (1903, p. 14) and both *Trichia* Reuter and *Tirgus* Kirkaldy were synonymized with *Ceratocapsus* Reuter, 1875 (MIRIDAE) by Carvalho (1958, p. 43). Both the homonyms *Trichia* Nietner, 1861 and *Trichia* Reuter, 1875 should be added to the Official Index, as should *Capillifera* Honigmann, 1906 (type species *Helix hispida* Linnaeus, 1758).

Gittenberger briefly refers to the wide use of the name *Trichia* in Myxomycetes. The existence of homonymous names in Myxomycetes and names in use elsewhere in zoology is far wider reaching than the present case and I think, therefore, that a decision must be taken with respect to *Trichia* without prejudice to other cases of homonymy. Thus I support the simple request by Gittenberger (paragraph 11 (1b)) for a ruling that *Trichia* (Mollusca) is not rendered invalid by *Trichia* (Myxomycetes).

In conclusion, I strongly support the application to conserve *Trichia* Hartmann, 1840 with the following additional or alternative proposals:

The International Commission on Zoological Nomenclature is asked:

(1) to use its plenary power to set aside all previous fixations of type species for the nominal genus *Trichia* Hartmann, 1840 and to designate *Helix hispida* Linnaeus, 1758 as the type species;

(2) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
   (a) *Capillifera* Honigmann, 1906 (a junior objective synonym of *Trichia* Hartmann, 1840) (Mollusca);
   (b) *Trichia* Nietner, 1861 (a junior homonym of *Trichia* Hartmann, 1840) (Lepidoptera);
   (c) *Trichia* Reuter, 1875 (a junior homonym of *Trichia* Hartmann, 1840) (Heteroptera).

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The issue raised by the application of whether names in an ambiregnal group such as Myxomycetes should compete in homonymy with names that are strictly zoological has implications far beyond the status of the name *Trichia*.

Taxa such as Myxomycetes (or Mycetozoa) that are subject to the provisions of both the zoological and botanical Codes of nomenclature can be problematic because the Codes may conflict. For example, in botany the criterion of consistent use of binominal nomenclature applies only to the availability of species-group names, whereas in zoology it applies to all names regulated by the Code. *Trichia* illustrates this problem: botanists attribute the name to van Haller (1768), but his work is non-binominal, with phrases such as 'Trichia brevissime petiolata purpurea' (p. 115), so zoologists must attribute *Trichia* to Hoffman (1790).

Corliss (BZN **52**: 11–17, March 1995) has reviewed the broad issues raised by ambiregnal taxa, so I will restrict myself here largely to the status of names of slime molds. Two provisions of the zoological Code are relevant: Article 1.1.1 states '... the term 'animals' refers to the Metazoa and also to protistan taxa when workers treat them as animals for the purposes of nomenclature ...'. Slime molds are typically studied by mycologists who follow the botanical Code; for that reason they could be considered to be outside the scope of zoological nomenclature. However, Article 2.2 states 'Any available name of a taxon that has at any time been classified as animal continues to compete in homonymy in zoological nomenclature even though the taxon is later not classified as animal'.

Keller (in Parker, 1982, p. 165) classified slime molds as Division Myxomycota of subkingdom Thallobionta within Kingdom Plantae. He stated that they may be 'classified with fungi, following the rules of botanical nomenclature ... or in the kingdom Protista at various taxonomic ranks, following zoological nomenclature'. The Protozoa (= Protista) have also been classified as a subkingdom within the Kingdom Animalia (for example, Parker 1982). Cavalier-Smith (1997) ranked slime molds as phylum Mycetozoa within the Sarcodina, together with phyla Amoebozoa and Rhizopoda, which fall under the zoological Code.

Myxomycetans are generally included in works that index the zoological literature. Of 132 genus-group names that I have found in Myxomycetes, mostly those recorded

by Martin, Alexopoulos and Farr (1983), 100 (76%) are listed in *Nomenclator Zoologicus*. Of the 32 that were missed, uses of 12 can be found in the *Zoological Record* online (1985–1999) and of another seven in *Biological Abstracts* online (1989–1999). Since 90% of myxomycetan genera are recorded in standard indexing sources, homonymy with strictly zoological names is easily detected. I have found seven instances of replacement names being proposed as a result of such homonymy:

Ceratiomyxia Schroeter in Engler & Prantl, 1889 = *Ceratium* Albertini & Schweinitz, 1805 non Schrank, 1793 (Trematoda);

Cribrarula Strand, 1929 (Gastropoda) = *Cribraria* Jousseaume, 1884 non Persoon, 1794;

Dianemina Loeblich & Tappan, 1961 = *Dianema* Rex, 1891 non Cope, 1871 (Pisces);

Hemitrichiella Brandt, 1956 (Gastropoda) = *Hemitrichia* Moellendorff, 1888 non Rostafinski, 1873;

Iyaiyai Evenhuis, 1994 (Diptera) = *Trichia* Hong, 1981 non Hoffman, 1790;

Schenckiella Thalmann, 1942 (Foraminiferida) = *Listerella* Cushman, 1933 non Jahn, 1906;

Tubuliferola Strand, 1917 (Lepidoptera) = *Tubulifera* Spuler, 1910 non Zopf in Schenck, 1885.

Thus, it seems widely accepted that names of Myxomycetes fulfill the requirements of Article 1.1.1. Even if this were not accepted as a general principle, Evenhuis's (1994) action in renaming *Trichia* Hong, 1981 (Diptera) recognised *Trichia* in Myxomycetes as competing in homonymy with names of animals under Article 2.2 (see para. 8 of the application).

There are seven other cases of homonymy between names in Myxomycetes and Metazoa where the junior name is still in use. In three of these cases, the name of the metazoan is preoccupied; in four cases, the name of the myxomycetan:

Collaria Provancher, 1872 (Hemiptera) non Nann-Bremek, 1967;

Cylichnium Dall, 1908 (Gastropoda) non Wallroth, 1833; the synonym *Volvulopsis* Schepman, 1913 is available as a substitute name;

Lepidoderma Reuss, 1855 (Eurypterida) non de Bary in Rostafinski, 1873;

Leptoderma Vaillant, 1886 (Pisces) non Lister, 1913;

Metatrichia Coquillett, 1900 (Diptera) non Ing, 1964;

Reticularia McCoy, 1844 (Brachiopoda) non Bulliard, 1788; the myxomycetan name is a synonym of *Mucilago* Adanson, 1763 but has been proposed for conservation against *Enteridium* Ehrenberg, 1818;

Strongylium Kirby, 1819 (Coleoptera) non Ditmar, 1809. The name of the myxomycetan has never been used according to Lado & Pando (1998).

In addition to these there are at least seven other cases of homonymy in which the junior name is no longer in use for a variety of reasons. A list of these has been given to the Commission Secretariat, together with a list of the 132 genus-group names found for myxomycetans.

As a malacologist I would find it convenient if the name *Trichia* Hartmann, 1840 could be conserved, but I find that the arguments against conserving it are persuasive. As Holthuis pointed out in his comment (BZN **57**: 109–110, June 2000), five separate actions are required to conserve the name. While I would not object to the suppression of *Trichia* De Haan, 1839 (Crustacea), I am opposed to ignoring the

homonymy between the myxomycete and molluscan names. Also, I am opposed to emending the spelling of TRICHIINAE Ložek, 1956 (Gastropoda) to TRICHIAINAE, which would be confusing. The priority of TROCHULINAE Lindholm, 1927 is therefore convenient and leads me to prefer the name *Trochulus* Alten, 1812 to *Trichia* Hartmann, 1840. If the molluscan *Trichia* were split into two separate genera for taxonomic reasons there could be no objection to learning a new generic name for some of the species. I do not see that the inconvenience will be much greater in learning a new generic name for all the species currently in *Trichia*.

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Comment on the proposed designation of *Buprestis nitida* Rossi, 1792 (currently *Anthaxia fulgurans* (Schrank, 1789)) as the type species of *Anthaxia* Eschscholtz, 1829 (Insecta, Coleoptera)

(Case 3118; see BZN **57**: 97–99)

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I should like to support the application by Dr Bílý to designate the nominal species *Buprestis nitida* Rossi, 1792 (a synonym of *B. fulgurans* Schrank, 1789) as the type species of *Anthaxia* Eschscholtz, 1829. Dr Bílý's world catalogue of the genus (Bílý, 1997) is the authoritative source for the established concepts of *Anthaxia* and its subgenera, and acceptance of his application would be in the interests of stability. To follow any of the early type designations (see para. 2 of the application) would upset the modern definition of a very large genus in which relationships are only now becoming understood.

It is worth noting that besides *Anthaxia* there are other genus-group names in the BUPRESTIDAE which might be affected by type designations made by Duponchel (in d'Orbigny, 1842) or by Desmarest (in Chenu, 1860); such designations may have been overlooked, because no complete list of type species in this family has been published.

Commment on the proposed conservation of *Orsodacne* Latreille, 1802 (Insecta, Coleoptera) by the designation of *Chrysomela cerasi* Linnaeus, 1758 as the type species

(Case 3103; see BZN **57**: 94–96)

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In his application Hans Silfverberg has presented a compelling case for setting aside the original type species fixation, by monotypy, of the genus *Orsodacne* Latreille, 1802.

I strongly endorse his case. There seems little sense in changing the nomenclature of an important group of insects (para. 5 of the application), the family ORSODACNIDAE Thomson, 1859 being the probable sister-taxon of CHRYSOMELIDAE (see Kuschel & May, 1990; Reid, 1995; Lawrence & Newton, 1995), because of events 198 years ago overlooked by all subsequent authors.

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Comment on the proposed conservation of LORISIDAE Gray, 1821 and GALAGIDAE Gray, 1825 (Mammalia, Primates) as the correct original spellings

(Case 3004; see BZN **55**: 165–168; **56**: 73; **57**: 51, 121–123)

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In their request to the Commission to reject our proposal to conserve LORISIDAE and GALAGIDAE as correct original spellings (to which we responded, BZN **57**: 121–123, June 2000), Groves and Jenkins (BZN **57**: 51, March 2000) in part based their argument for rejection of these spellings on the fact that we had not included discussion of the family name INDRIIDAE. Their point was that, if we objected to Jenkins's (1987) revival of the original spelling of the family names as LORIDAE and GALAGONIDAE, why had we not also objected to her revival of the original spelling of the family name INDRIDAE? As we stated in our previous communication (BZN **57**: 121–123), we had not wanted to confuse our existing proposals with discussion of the latter. However, the case for retaining INDRIIDAE as the correct spelling of the family name is as straightforward as that for LORISIDAE and GALAGIDAE.

Gmelin (1788, p. 42) introduced the specific name *indri* in the binomen *Lemur indri*, and E. Geoffroy Saint-Hilaire (in E. Geoffroy Saint-Hilaire & Cuvier, 1796, p. 46)

established the generic name *Indri* for the two new nominal species *Indri brevicaudatus*, based on 'l'Indri' of Sonnerat (1782), and *I. longicaudatus*. Geoffroy Saint-Hilaire (p. 46) cited *Indri brevicaudatus* as a synonym of *Lemur indri* Gmelin and the latter is the type species of the genus *Indri* by absolute tautonymy (Article 68.4 of the Code). *Indri longicaudatus* was cited as a synonym of *Lemur laniger* Gmelin; the species is now included in *Avahi* Jourdan, 1834.

Under Article 29.3.3 of the Code, *Indr-* is the correct stem of the generic name *Indri* since, as noted by Jenkins (1987), Burnett (1828, p. 307) introduced and spelled as INDRIDAE the name for the lemuriform family now recognized as containing the genera *Avahi* Jourdan, 1834, *Propithecus* Bennett, 1832 and *Indri* E. Geoffroy Saint-Hilaire, 1796. (Jenkins misquoted the 1828 Burnett reference as '*Quarterly Journal of Literature, Science, and Arts London*'; see references below.) However, since Burnett (1828), as Jenkins herself observed, the family name was most frequently spelled by authors as INDRIIDAE. Interestingly, the spelling of the family name as INDRIDAE was used even less frequently than its sometime alternative INDRISIDAE (or the subfamily INDRISINAE) used during the early 20th century (see, for example, Elliot, 1912; Gregory, 1915), which had been based on the invalid generic name *Indris* Cuvier, 1800. Especially since 1931, however, with the highly influential taxonomic work of Schwarz, INDRIIDAE has been the most consistently used spelling of the family name.

Subsequent to Jenkins's (1987) observation, a few authors (for example, Shapiro, 1995; Godfrey et al., 1995; Kolnicki, 1999; Ankel-Simons, 2000) have reverted to Burnett's spelling. On the other hand, the standard reference for much of the mid-20th century (Hill, 1953), and the recent seminal works of Martin (1990), Conroy (1990, 1997), Fleagle (1998, which was replaced by Fleagle, 1999) and Delson et al. (2000, which superseded Tattersall et al., 1988) have all used the spelling INDRIIDAE. As publications used by those primarily involved in the study of primate systematics and taxonomy, these are works that have most influence in the scientific language of the primatological literature. Nowak (1999), which is a standard reference work on living mammals, and the vast majority of those studying primates have maintained the traditional spelling of INDRIIDAE (see, for example, Tattersall, 1982; Gebo & Dagosto, 1988; Demes, Jungers & Selpien, 1991; Mittermeier et al., 1994; Razafindraibe, Montagnon & Ravoarimanana, 1997; Warren & Crompton, 1997; Jolly, 1998; Yamashita, 1998; Zietkiewicz, Richer & Sinnett, 1998; Matano & Ohta, 1999; Razafindraibe, Montagnon & Rumpler, 2000).

Nothing but further confusion will result from reverting to the Burnett (1828) spelling and we therefore ask the Commission to use its plenary power to conserve the traditional spelling of INDRIIDAE as the correct spelling for the family-group name.

The names Strepsirhini and Haplorhini, mentioned by Groves & Jenkins (BZN **57**: 51) and by Schwartz et al. (BZN **57**: 123), relate to primate suborders and their spellings are not covered by the Code. With rare exceptions, however, the spellings of these names have been consistently as cited here and the Code lays clear emphasis on the stability of usage of names.

The International Commission of Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to rule that the correct original spelling of the family-group name based on *Indri* E. Geoffroy Saint-Hilaire, 1796 is INDRIIDAE Burnett, 1828;

(2) to place on the Official List of Generic Names in Zoology the name *Indri* E. Geoffroy Saint-Hilaire, 1796 (gender: masculine), type species by absolute tautonymy *Lemur indri* Gmelin, 1788;

(3) to place on the Official List of Specific Names in Zoology the name *indri* Gmelin, 1788, as published in the binomen *Lemur indri* (the type species of *Indri* E. Geoffroy Saint-Hilaire, 1796);

(4) to place on the Official List of Family-Group Names in Zoology the name INDRIIDAE Burnett, 1828 (type genus *Indri* E. Geoffroy Saint-Hilaire, 1796), ruled in (1) above to be the correct original spelling;

(5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name INDRIDAE Burnett, 1828 (ruled in (1) above to be an incorrect original spelling).

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Zietkiwicz, E., Richer, C. & Sinnett, D. 1998. Monophyletic origin of *Alu* elements in primates. *Journal of Molecular Evolution*, **47**: 172–182.

OPINION 1963

Blennocampa Hartig, 1837, *Cryptocampus* Hartig, 1837, *Taxonus* Hartig, 1837, *Ametastegia* A. Costa, 1882, *Endelomyia* Ashmead, 1898, *Monsoma* MacGillivray, 1908, *Gemmura* E.L. Smith, 1968, BLENNOCAMPINI Konow, 1890 and CALIROINI Benson, 1938 (Insecta, Hymenoptera): conserved by setting aside the type species designations by Gimmerthal (1847) and recognition of those by Rohwer (1911)

Keywords. Nomenclature; taxonomy; Hymenoptera; TENTHREDINIDAE; BLENNOCAMPINAE; CALIROINI; *Blennocampa*; *Cryptocampus*; *Taxonus*; *Ametastegia*; *Endelomyia*; *Monsoma*; *Gemmura*; sawflies.

Ruling

(1) Under the plenary power all previous fixations of type species prior to those by Rohwer (1911) are hereby set aside for the following nominal genera:
   (a) *Poecilostoma* Dahlbom, 1835, and *Tenthredo guttata* Fallén, 1808 is designated as the type species;
   (b) *Blennocampa* Hartig, 1837, and *Tenthredo* (*Allantus*) *pusilla* Klug, 1816 is designated as the type species;
   (c) *Cryptocampus* Hartig, 1837, and *Nematus* (*Cryptocampus*) *medullarius* Hartig, 1837 is designated as the type species;
   (d) *Taxonus* Hartig, 1837, and *Tenthredo* (*Allantus*) *nitida* Klug, 1817 is designated as the type species.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
   (a) *Poecilostoma* Dahlbom, 1835 (gender: neuter), type species by subsequent designation by Rohwer (1911) *Tenthredo guttata* Fallén, 1808 (a junior subjective synonym of *Tenthredo liturata* Gmelin, 1790), as ruled in (1)(a) above;
   (b) *Blennocampa* Hartig, 1837 (gender: feminine), type species by subsequent designation by Rohwer (1911) *Tenthredo* (*Allantus*) *pusilla* Klug, 1816 (invalid senior objective synonym of *Blennocampa phyllocolpa* Viitasaari & Vikberg, 1985), as ruled in (1)(b) above;
   (c) *Cryptocampus* Hartig, 1837 (gender: masculine), type species by subsequent designation by Rohwer (1911) *Nematus* (*Cryptocampus*) *medullarius* Hartig, 1837 (a junior subjective synonym of *Cynips amerinae* Linnaeus, 1758), as ruled in (1)(c) above;
   (d) *Taxonus* Hartig, 1837 (gender: masculine), type species by subsequent designation by Rohwer (1911) *Tenthredo* (*Allantus*) *nitida* Klug, 1817 (a junior subjective synonym of *Tenthredo agrorum* Fallén, 1808), as ruled in (1)(d) above;
   (e) *Ametastegia* A. Costa, 1882 (gender: feminine), type species by monotypy *Ametastegia fulvipes* A. Costa, 1882 (a junior subjective synonym of *Tenthredo glabrata* Fallén, 1808);

(f) *Endelomyia* Ashmead, 1898 (gender: feminine), type species by monotypy and original designation *Selandria rosae* Harris, 1841 (a junior subjective synonym of *Tenthredo aethiops* Gmelin, 1790);
(g) *Monsoma* MacGillivray, 1908 (gender: neuter), type species by monotypy and original designation *Poecilostoma inferentia* Norton, 1868;
(h) *Gemmura* E.L. Smith, 1968 (gender: feminine), type species by original designation *Nematus* (*Cryptocampus*) *mucronatus* Hartig, 1837;
(i) *Caliroa* A. Costa, 1859 (gender: feminine), type species by monotypy *Caliroa sebetia* A. Costa, 1859 (a junior subjective synonym of *Tenthredo* (*Allantus*) *cinxia* Klug, 1816).

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
(a) *liturata* Gmelin, 1790, as published in the binomen *Tenthredo liturata* (senior subjective synonym of *Tenthredo guttata* Fallén, 1808, the type species of *Poecilostoma* Dahlbom, 1835);
(b) *phyllocolpa* Viitasaari & Vikberg, 1985, as published in the binomen *Blennocampa phyllocolpa* (junior objective synonym of *Tenthredo* (*Allantus*) *pusilla* Klug, 1816 (a junior primary homonym of *T. pusilla* O.F. Müller, 1776), the type species of *Blennocampa* Hartig, 1837);
(c) *amerinae* Linnaeus, 1758, as published in the binomen *Cynips amerinae* (senior subjective synonym of *Nematus* (*Cryptocampus*) *medullarius* Hartig, 1837, the type species of *Cryptocampus* Hartig, 1837);
(d) *agrorum* Fallén, 1808, as published in the binomen *Tenthredo agrorum* (senior subjective synonym of *Tenthredo* (*Allantus*) *nitida* Klug, 1817, the type species of *Taxonus* Hartig, 1837);
(e) *glabrata* Fallén, 1808, as published in the binomen *Tenthredo glabrata* (senior subjective synonym of *Ametastegia fulvipes* A. Costa, 1882, the type species of *Ametastegia* A. Costa, 1882);
(f) *aethiops* Gmelin, 1790, as published in the binomen *Tenthredo aethiops* (senior subjective synonym of *Selandria rosae* Harris, 1841, the type species of *Endelomyia* Ashmead, 1898);
(g) *inferentia* Norton, 1868, as published in the binomen *Poecilostoma inferentia* (specific name of the type species of *Monsoma* MacGillivray, 1908);
(h) *mucronatus* Hartig, 1837, as published in the binomen *Nematus* (*Cryptocampus*) *mucronatus* (specific name of the type species of *Gemmura* E.L. Smith, 1968);
(i) *cinxia* Klug, 1816, as published in the binomen *Tenthredo* (*Allantus*) *cinxia* (senior subjective synonym of *Caliroa sebetia* A. Costa, 1859, the type species of *Caliroa* A. Costa, 1859).

(4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:
(a) BLENNOCAMPINI Konow, 1890 (type genus *Blennocampa* Hartig, 1837);
(b) CALIROINI Benson, 1938 (type genus *Caliroa* A. Costa, 1859).

History of Case 3063

An application for the conservation of seven generic and two family-group names in Hymenoptera by setting aside the type species designations of Gimmerthal (1847)

and recognising those of Rohwer (1911) was received from Drs Stephan M. Blank and Andreas Taeger (*Deutsches Entomologisches Institut, Eberswalde, Germany*) on 13 August 1997. After correspondence the case was published in BZN **56**: 121–127 (June 1999). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 2000 the members of the Commission were invited to vote on the proposals published in BZN **56**: 124–125. At the close of the voting period on 1 June 2000 the votes were as follows:

Affirmative votes — 21: Bock, Brothers, Cocks, Cogger, Eschmeyer, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Papp, Patterson, Ride, Savage, Schuster, Song, Štys

Negative votes — none.

Bouchet abstained.

No vote was received from Dupuis.

Lehtinen was on leave of absence.

Bouchet abstained because in his view insufficient evidence had been given for the conservation of the names *Monsoma* MacGillivray, 1908 and *Gemmura* E.L. Smith, 1968; he also pointed out that the name CALIROINI Benson, 1938 is senior to HETERARTHRINAE Benson, 1952 (cf. para. 2 of the application). Dupuis declined to vote on the grounds that less than a year had elapsed since publication of the case. [*Editorial note*. An explanation of procedure followed in sending cases for voting was given in BZN **54**: 53–54, March 1997].

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

aethiops, *Tenthredo*, Gmelin, 1790, *Caroli a Linné Systema Naturae*, Ed. 13, vol. 1, part 5, p. 2992.

agrorum, *Tenthredo*, Fallén, 1808, *Kongl. Vetenskaps Academiens Handlingar*, **29**(1): 60.

amerinae, *Cynips*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 554.

Ametastegia A. Costa, 1882, *Rendiconto dell'Accademia delle Scienze Fisiche e Matematiche*, **21**(10): 198.

Blennocampa Hartig, 1837, *Die Aderflügler Deutschlands mit besonderer Berücksichtigung ihres Larvenzustandes und ihres Wirkens in Wäldern und Gärten für Entomologen, Wald- und Gartenbesitzer . . .*, vol. 1, p. 266.

BLENNOCAMPINI Konow, 1890, *Deutsche Entomologische Zeitschrift*, **1890**(2): 248.

Caliroa A. Costa, 1859, Imenotteri. Part 3a (Trivellarti sessiliventri) *in* Costa, O., *Fauna del Regno Napoli*, part 5 (Imenotteri), p. 59.

CALIROINI Benson, 1938, *Transactions of the Entomological Society of London*, **87**(15): 368.

cinxia, *Tenthredo* (*Allantus*), Klug, 1816, *Magazin. Gesellschaft Naturforschender Freunde zu Berlin*, **8**(1): 69–70.

Cryptocampus Hartig, 1837, *Die Aderflügler Deutschlands mit besonderer Berücksichtigung ihres Larvenzustandes und ihres Wirkens in Wäldern und Gärten für Entomologen, Wald- und Gartenbesitzer . . .*, vol. 1, p. 221.

Endelomyia Ashmead, 1898, *Canadian Entomologist*, **30**(10): 256.

Gemmura E.L. Smith, 1968, *Annals of the Entomological Society of America*, **61**(6): 1401.

glabrata, *Tenthredo*, Fallén, 1808, *Kongl. Vetenskaps Academiens Handlingar*, **29**(2): 108.

inferentia, *Poecilostoma*, Norton, 1868, *Transactions of the American Entomological Society*, **2**: 224.

liturata, *Tenthredo*, Gmelin, 1790, *Caroli a Linné Systema Naturae*, Ed. 13, vol. 1, part 5, p. 2668.

Monsoma MacGillivray, 1908, *Canadian Entomologist*, **40**(10): 368.

mucronatus, *Nematus* (*Cryptocampus*), Hartig, 1837, *Die Aderflügler Deutschlands mit besonderer Berücksichtigung ihres Larvenzustandes und ihres Wirkens in Wäldern und Gärten für Entomologen, Wald- und Gartenbesitzer . . .*, vol. 1, p. 223.

phyllocolpa, *Blennocampa*, Viitasaari & Vikberg, 1985, *Notulae Entomologicae*, **65**: 2.

Poecilostoma Dahlbom, 1835, *Conspectus Tenthredinidum, Siricidum et Oryssinorum Scandinaviae quas Hymenopterorum familias*, pp. 5, 13.

Taxonus Hartig, 1837, *Die Aderflügler Deutschlands mit besonderer Berücksichtigung ihres Larvenzustandes und ihres Wirkens in Wäldern und Gärten für Entomologen, Wald- und Gartenbesitzer . . .*, vol. 1, p. 297.

The following is the reference for the designation of *Tenthredo guttata* Fallén, 1808 as the type species of the nominal genus *Poecilostoma* Dahlbom, 1835, of *Tenthredo* (*Allantus*) *pusilla* Klug, 1816 as the type species of the nominal genus *Blennocampa* Hartig, 1837, of *Nematus* (*Cryptocampus*) *medullarius* Hartig, 1837 as the type species of the nominal genus *Cryptocampus* Hartig, 1837, and of *Tenthredo* (*Allantus*) *nitida* Klug, 1817 as the type species of the nominal genus *Taxonus* Hartig, 1837:

Rohwer, S.A. 1911. *U.S. Department of Agriculture, Bureau of Entomology, Technical Series*, **20**(2): 87, 75, 77 and 90 respectively.

OPINION 1964

Apis proava Menge, 1856 (currently *Electrapis proava*; Insecta, Hymenoptera): conserved by the designation of a neotype

Keywords. Nomenclature; taxonomy; Hymenoptera; APIDAE; *Apis proava*; fossil bees; Baltic amber; Eocene.

Ruling

(1) Under the plenary power all previous type fixations for the nominal species *Apis proava* Menge, 1856 are hereby set aside and the paralectotype (specimen no. BMNH In.18757 in the Palaeontology Department, The Natural History Museum, London) is designated as the neotype.

(2) The name *proava* Menge, 1856, as published in the binomen *Apis proava* and as defined by the neotype designated under the plenary power in (1) above, is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3124

An application for the conservation of the specific name of *Apis proava* Menge, 1856 by the designation of a neotype was received from Dr Michael S. Engel (*American Museum of Natural History, New York, N.Y., U.S.A.*) on 29 March 1999. After correspondence the case was published in BZN **56**: 134–135 (June 1999). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 2000 the members of the Commission were invited to vote on the proposals published in BZN **56**: 135. At the close of the voting period on 1 June 2000 the votes were as follows:

Affirmative votes — 20: Bock, Bouchet, Brothers, Cocks, Cogger, Eschmeyer, Heppell, Kerzhner, Macpherson, Martins de Souza, Mawatari, Minelli, Nielsen, Papp, Patterson, Ride, Savage, Schuster, Song, Štys

Negative votes — 2: Kraus and Mahnert.

No vote was received from Dupuis.

Lehtinen was on leave of absence.

Kraus commented: 'I vote against the proposal to designate the existing paralectotype as the neotype of *Apis proava* Menge, 1856 because neither stability nor universality are threatened; the paralectotype does not leave any doubt about the identity of the species'. Mahnert commented: 'The identity of the species is clearly established, and even if the lectotype is in poor condition, the name *A. proava* is not threatened'. Dupuis declined to vote on the grounds that less than a year had elapsed since publication of the case. [*Editorial note*. An explanation of procedure followed in sending cases for voting was given in BZN **54**: 53–54, March 1997].

Original references

The following is the original reference to the name placed on an Official List by the ruling given in the present Opinion:

proava, *Apis*, Menge, 1856, *Lebenszeichen vorweltlicher, im Bernstein eingeschlossener Thiere*, p. 26.

AUTHORS IN VOLUME 57 (2000)

NAMES PLACED ON OFFICIAL LISTS AND INDEXES IN RULINGS OF THE COMMISSION PUBLISHED IN VOLUME 57 (2000)

Names placed on the Official Lists and Indexes, and emendments of existing entries, in Volume 57 are listed below under three headings: Family-Group Names, Generic Names and Specific Names. Entries on the Official Lists are in bold type and those on the Official Indexes in non-bold type.

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CACATUINAE Gray, 1840 (Aves). Op. 1949
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HAMINEINAE Pilsbry, 1895 (Gastropoda). Op. 1942
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SPHAERIIDAE Erichson, 1845 (Coleoptera). Op. 1957
SPHAERIIDAE Jeffreys, 1862 (1820) (Coleoptera). Op. 1957
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(for names in Rulings of the Commission see pages 239–241)

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